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For Seed
A&M
reliable
SEEDS

AGGELER & MUSSER SEED CO. LOS ANGELES



A&M KLONDIKE

THIRTIETH
ANNUAL
CATALOG
1923

HOW TO ORDER BY MAIL

YOUR NAME AND ADDRESS—Be sure that your name and address are written very plainly on each order. We frequently receive orders with either the name or the address omitted.

It is important that you fill out plainly and in full the mail order blank which accompanies this catalog. This will avoid delay in your order. If your order does not reach you promptly please notify us.

CASH WITH ORDER—Remittances should be made by post office, money order, express money order or bank draft for a sufficient amount to cover the entire order and required postage if any. Stamps of 2 cent denomination will be accepted for small amounts.

PRICES—Prices in this catalog cancel all previous issues and are subject to market fluctuations and to change without notice. For quantity prices write for current quotations.

SHIPPING—We will use our best judgment as to the most efficient way of sending orders when specific directions are not given. If special directions in shipping are needed, state them explicitly in space provided for them on order blank.

SEEDS BY MAIL

Parcel post rates apply on weights up to 70 lbs. in the first, second and third zones (see table below) and in all zones of 300 miles or more the limit weight is fifty pounds. Parcel post rates are usually cheaper than express with the added advantage of having the parcel delivered to your door. We pay postage on everything priced postpaid but on figuring postage for larger orders, please refer to the rate table below. Poisons are not mailable. They must be sent by express or freight. We also advise sending heavy hardware and long handle tools by express or freight as many of them are not mailable. We are constantly in touch with shipping regulations and very often if we are allowed the privilege of using our own judgment we can make a saving to our customers. If you are in doubt about how shipment should be made and wish to leave it for us to decide, mark shipping instructions on your order sheet "cheapest way."

FOREIGN PARCEL POST—The parcel post rate to foreign countries is 12 cents per pound. Foreign correspondents should add a sufficient amount to cover postage at this rate, if not ordering postpaid articles.

DOMESTIC PARCEL POST RATES						First pound or fraction	Each Additional Pound or Fraction
On Seeds, Plants, Bulbs, Roots, Books, Tools, etc. within the U. S. and Possessions							
First Zone, Los Angeles and within	50 miles of Los Angeles					5c	1c
Second Zone	within 50 to 150	"	"	"		5c	1c
Third Zone	150 to 300	"	"	"		6c	2c
Fourth Zone	300 to 600	"	"	"		7c	4c
Fifth Zone	600 to 1000	"	"	"		8c	6c
Sixth Zone	1000 to 1400	"	"	"		9c	8c
Seventh Zone	1400 to 1800	"	"	"		11c	10c
Eighth Zone	all over 1800	"	"	"		12c	12c

NON-WARRANTY: Note—There are so many contingencies to be encountered in growing plants from seed and in setting out plants that are dependent on the weather and other conditions over which we have no control, that success in planting is not altogether dependent on the seed or plant. We will send out only seed which we believe will grow and produce the kind of plant and variety represented, but:

Aggeler & Musser Seed Co. give no warranty, expressed or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs, plants or trees they send out, and they will not be responsible in any way for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

AGGELER & MUSSER SEED CO.

H. L. Musser
Our President since our
Incorporation in 1896

E. A. Aggeler
Our Vice-President since our
re-organization in 1905

W. B. Early
Our Secretary Since 1905

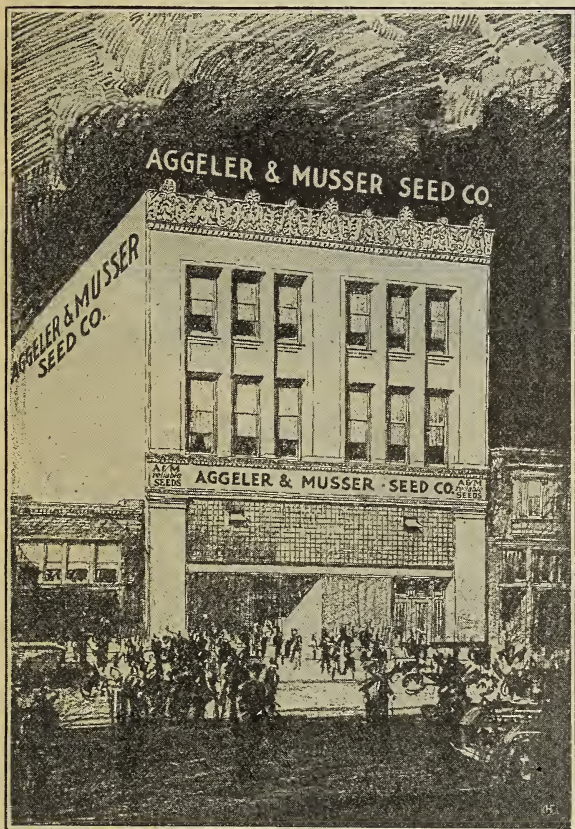
F. C. McNabb
Treasurer

Thirtieth Annual Catalog

of the

Aggeler & Musser Seed Company

ESTABLISHED 1893.



Our New Home
752 South Spring St.

Announcement

With the purchase of our large warehouse and mill and the completion and occupancy of our new retail store the Aggeler & Musser Seed Company may well now be considered one of the largest and best equipped wholesale and retail seed houses on the Pacific Coast. This marvelous growth, covering a period of thirty years is but a natural result brought about by our policy of fair dealing, reliable service, and our increasing efforts to make our business an institution of service in the upbuilding of our community and state.

Our New Location

We have executed a lease on the property at 752 and 754 South Spring Street extending through to 755 South Main Street. Here we have erected a three story building. Our Main store occupies the entire lower floor having a frontage both on Spring and on Main Streets.

This store is right up to date in every department. We are now better than ever before enabled to give the very best service.

Our General Offices

Our general offices will occupy the second floor. This is easily accessible to all who have business with us. We invite you to come here and get acquainted. We are on the East side of Spring Street second door north of Eighth.

Our Warehouse

We have, during the year purchased the large warehouse and adjoining lot at 1920-1934 East Fifteenth Street. One hundred and sixty-five feet on Fifteenth Street and two hundred ten feet deep, with railroad track at the rear. Here we have a cleaning mill equipped with the most modern machinery for cleaning all kinds of seeds, and air-tight vaults for fumigation. All grain received in car-lots is unloaded into an elevator and carried to the mill where it is cleaned and sacked.

If at any time you receive grain that is not clean you will do us a favor if you will advise us.

Receiving Department

It is in this warehouse we receive all seeds whether in car lots or less. They are here inspected, cleaned, numbered and two samples taken; one is given to our gardener to be planted in our trial grounds that they may be tested for germination and type. The other sample is taken to the laboratory to be tested for germination and purity. This work we have been doing for many years with the result that our seeds have an enviable reputation for reliability.

Delivery Department

It is from this warehouse that all seeds are delivered to trucks and distributed to all parts. Our service in this department has been lauded by truckers as the most efficient in the city.



Our Warehouse and Mill at 1934 East 15th Street

Size of Warehouse 110x230

Size of Mill, 60x60.



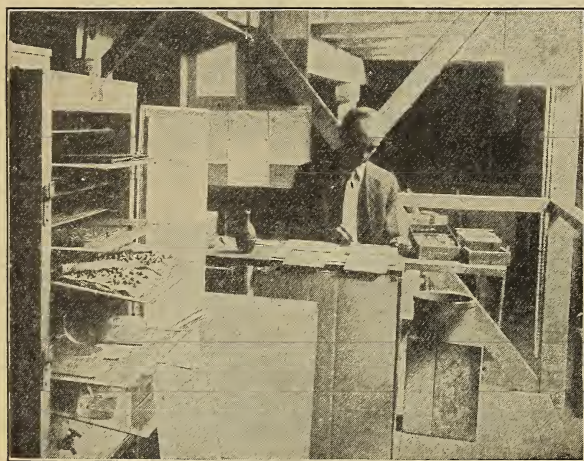
Our Order Department

Our Order Department

Our Order Department occupies a space in the warehouse 70x100 feet. This department is a large institution in itself. We have a packet filling machine which fills all packets with equal portions of seeds and seals them. It has a capacity of sixty thousand packets per day.

Our Order Department requires the full service of several efficient clerks whose sole duty is to receive the orders, read them, if correct, give them the O. K., numbers and records them IN. After they have been filled by an army of clerks, they are again checked up, weighed, stamped and recorded OUT.

This system has brought many favorable compliments from customers regarding our efficiency.



Our Laboratory for testing seeds.

Laboratory

Ample space is set aside for laboratory work. By an act of the Legislature it is now necessary to label all field seeds stating the approximate percentage of purity and germination. This is for your protection and it also protects you from irresponsible persons not in the seed business who would sell you unreliable seeds, and it protects the seed dealer from such competition. For many years we have had such a laboratory.

Our Branch Store

At 767 South Central Avenue we have a branch store for the convenience of market gardeners who attend the market, and for others who find it more convenient to stop here where there is no parking ordinance to limit your time.

This store is situated on South Central Avenue, just opposite the Terminal Market.



Our Branch Store at 767 S. Central Ave.

Trial Garden

Our trial garden is located aside of the warehouse where it is convenient to make frequent observations and records.

To the Newcomer or Beginner

Do not hesitate to take advantage of this offer to put at your disposal all the information we have accumulated during a period of thirty years. Read this catalog carefully and if we fail to have answered your questions, do not hesitate to ask what you wish to know concerning your problems.

We have gone to a great expense to put this catalog before you, feeling it is a duty to, not only have good seed, but to aid in every way possible that our seed may produce maximum results. We aim to have our catalog a source of education and our seeds a dependable source of wealth.



A & M Boosters Annual Picnic

Our Organization

The minimum number of employees is seventy. The maximum number during the busy season is above one hundred.

Every employee from manager to janitor loves the work, is loyal to the organization and each and every one is striving to do their part with greatest efficiency. Their hearts are in the work. They have organized a club which they have named the A. & M. Boosters. They meet once a month in order to become more efficient by discovering any weak spots in our organization, and brace up every deficiency in our service. "Better Team Work" is the slogan.

The dances we have from time to time are all most enjoyable social events. Our annual picnic is the crowning event of the year.

Progress

The work in vegetable production of the University of California College of Agriculture and Agricultural Experiment Station has been reorganized in a way to make it the equal of similar work in any educational institution in the United States. The Regents of the University have secured the services of two of the leading specialists in this field. Dr. Henry A. Jones, Professor of Vegetable Gardening in the Maryland College of Agriculture, has accepted the position of Head of the Division of Olericulture at the University Farm, Davis. He will be assisted by J. T. Rosa, Jr., who has been Assistant Professor of Horticulture of the University of Missouri. Professors Jones and Rosa will assume their teaching and investigational duties at Davis about the first of November. In addition the Division of Genetics at Berkeley is now at work on the problem of improving through breeding and selection certain types of vegetables under the direction of Professor E. B. Babcock.

The effort to improve vegetables has for its ideal the fixing of standard types. Of all vegetables the pepper has reached the highest state of perfection. It has been molded into shape, size, and degree of pungency to suit every desired purpose. The vegetable farthest from perfection is undoubtedly the tomato. This may be owing to the many uses for which the tomato is grown. The canner desires one type, the shipper another, and the consumer something entirely different. The pickle-man, the sauce maker, and the preserver work for various varieties. One variety will grow to perfection on a certain type of soil, another not at all satisfactorily. While different varieties must be had for different purposes, all must be resistant to the various kinds of blight, nematode and other troubles to which the tomato is subject.

The canner and shipper can now say to the University: I want a vegetable with certain shape, flavor, color, firmness, etc., and in due time it will be produced. The University in its work will have the co-operation of every Farm Bureau in the State and of every Farm Bureau member. Thus will be made available for experimentation every conceivable condition of soil, climate, moisture and altitude. To secure definite results, however, will require at least three years' time.

HARDY W. CAMPBELL

981 SOUTHERN PACIFIC BLDG., SAN FRANCISCO

Mr. Hardy W. Campbell is the man who reduced dry farming to a science. He sacrificed a fortune that the world might be benefited by his observations. He unselfishly devotes his time to compiling and publishing this information and distributes it freely. If you are a grain farmer ask him for Bulletin No. 10, or if you are a dry farmer of any kind write him describing your soil and telling him what crops you wish to grow.

Write us for one of the following books published by Mr. Hardy W. Campbell:

Campbell's Soil Culture Primer, 100 pages,60c
Campbell's Soil Culture Manual, 350 pages, \$2.75

Some Reasons Why You Should Be a Successful Agriculturist

With Agriculture taught in the elementary schools, demonstrated by practical gardening. With students of the high schools doing actual farming in all its phases of agriculture, including animal husbandry and tractor work. With your county farm advisor at your call. Your State University offering free a six-weeks' course in agriculture or a course in any particular branch of agriculture. Or if you can not spare the time to go to college, the education will come to you by correspondence.

Send to the University of California College of Agriculture, Berkeley, California. Ask for circular No. 113 entitled "Correspondence Courses in Agriculture" by W. G. Hammel.

This circular contains a list of Bulletins and Circulars on other subjects.

In addition to all this the United States Department of Agriculture offers you free of charge, literature on almost any conceivable subject in which you may be interested.

Farm Bureau

As soon as you read this ascertain from your County Farm Bureau the fee for your county and become a member without further delay. You are missing something worth while. The Farm Bureau Monthly that comes to you free is worth many times the price of membership.

WHY YOU SHOULD BELONG TO THE FARM BUREAU:

- 1.—Because you get more real agricultural education for your investment than from any other source.
- 2.—You can get it when you want it, on any agricultural subject in which you may be interested.
- 3.—When insects are destroying your garden, when your plants are dying from disease, your farm advisor will tell you what to do.
- 4.—When your poultry or livestock are sick, consult your farm advisor.
- 5.—With the aid of the Farm Advisor you should have the best of everything, whether it be livestock or crops of any kind.
- 6.—You can get advertising, and much assistance in marketing your crops.
- 7.—You are co-operating with approximately one million members of the American Farm Bureau Federation, all working to better conditions for the real farmer.

Agricultural Journals

For a small annual subscription you may get the following Agricultural Journals, all published in Los Angeles, California, except the Pacific Rural Press:

California Cultivator, weekly; \$1.00 per year.
Farm and Tractor, weekly; a part of the Los Angeles Times.
The California Farmer, semi-monthly; \$1.00 per year.
Pacific Rural Press, weekly; \$1.00 per year (San Francisco).

These Journals put before you in an interesting way all the agricultural news up-to-date. They publish reports of commodities which are highly instructive, and very often the information you need. Read them carefully and you will find in season many solutions to your daily trouble. The advertising columns may sell your products or show you where to buy.

Send at once for one or more of these journals; they are too valuable to ignore.

We will accept your subscription at the counter.

Monthly Bulletin

If you would have up-to-date information in horticulture send your name and address to the Department of Agriculture, Sacramento, California, asking that your name be put on the list to receive the monthly bulletin.

More Reasons Why You Should Be a Successful Agriculturalist

Agricultural Courses by Mail are Popular

An excellent means of obtaining a knowledge of the fundamentals of agriculture is afforded by the correspondence courses offered by the University of California college of agriculture. These courses are intended primarily for those who are already engaged in agricultural pursuits, or prospective farmers. When an intending student enrolls by sending his application and the fee of \$2 for a selected course to the Division of Agricultural Education, University of California, Berkeley, a mimeographed sheet of information and questions is sent to him by mail, these questions, upon being answered, are corrected at the university and the next sheet of lessons and questions is sent out.

The courses offered this year cover the following subjects: Alfalfa, corn, onion, barley, pear, walnut, almond, fig, plum, prune, date, avocado, and apricot culture; grape growing, citrus fruit growing, semi-tropical fruit growing, olive growing, vegetable gardening, dairy, swine, sheep, poultry and rabbit husbandry; milch goat raising, home floriculture, home ground ornamentation, canning and preserving, normal nutrition, lumber and its uses, business aspects of California agriculture, and apiarian management.

The courses are proving very popular and the enrollment is steadily increasing, according to the university authorities.

The Agricultural Department of the Chamber of Commerce

This department specializes in giving aid to the newcomer who, unacquainted with Southern California and local conditions, would buy a small ranch need only to apply to Dr. George Clements, Secretary of the Agricultural Department of the Los Angeles Chamber of Commerce. You will then be guided aright, and may be saved the embarrassment of a costly mistake.

To the newcomer looking for a home, we advise you to consult or write the Agricultural Department of the Los Angeles Chamber of Commerce.

Most Important of All

Attend the Fruit Growers and Farmers Conventions held somewhere during October each year. Also be sure to attend the Farm Bureau meetings.

Three Most Valuable Books for California

By Edward J. Wickson, A. M.

Emeritus Professor of Horticulture in the University of California; Editor of the Pacific Rural Press.

The California Fruits and How to Grow Them
Ninth Edition, 1921

Price \$4.00; postpaid \$4.15

The California Vegetables in Garden and Field

Price \$2.00; postpaid \$2.15

California Garden-Flowers, Shrubs, Trees and Vines

Price \$1.50; postpaid \$1.70

These three books are standard and authentic works on these subjects of fruit growing, vegetable raising and general flower gardening about the home. Written by one who knows California conditions thoroughly.

Seed Catalog

You also have thrust upon you without cost the annual seed catalog which helps you out where all else fails. It tells you in a nutshell what to plant, when, where and how to plant it, and most important of all your seed catalog tells you where to buy the most reliable seeds for each particular condition of soil, climate and market. There is positively no excuse for inefficiency.

Do You Want This Catalog?

Be sure and send us an order for seeds if you want this catalog next year. If you do not send us an order your name is taken from our mailing list, believing you have changed your address, or you may have come to the store, where you can get a catalog at the counter. We prefer to have you on our list as an annual customer; then you will always get our catalog as soon as it comes from the press.

WHEN YOU CHANGE YOUR ADDRESS NOTIFY US IF YOU WANT THIS CATALOG

Following the proper preparation of the soil every farmer should have reliable seed to further insure success. We aim to give the farmer seeds that can be relied upon to make success complete.

Success is more certain if the seed be selected to suit the soil, season and purpose. This catalog will help you make the proper selection.

Thanks to the excellent work done by the U. S. Department of Agriculture and the various State Colleges of Agriculture, science is now being applied to our arable lands, which has increased the acreage yield of some crops as much as 25 per cent with an average gain all along the line of 16 per cent.

Much more is promised when the American Farm Bureau Federation gets down to co-operative team-work.

Agricultural Books

	Price	Pstpd.
Cabbage and Cauliflower, by Allen	\$.75	\$.85
California Fruit and How to Grow It, by Wickson	4.00	4.15
California Vegetables, by Wickson	2.00	2.25
California Garden Flowers, Shrubs, Trees and Vines	1.50	1.70
Second 1000 Questions in California Agriculture Answered by Wickson	1.50	1.70
Campbell's Soil Culture Manual, 350 pages	2.50	2.75
Campbell's Soil Culture Primer, 100 pages .....	.50	.60
Celery Culture, by Beattie .....	.75	.85
The Corn Crop, by E. G. Montgomery .....	.....	2.25
Farm Grasses of the United States, by Spillman	1.60	1.75
Forage Crops Other Than Grasses, by Shaw	1.60	1.75
Wild Flowers of California, by P. B. Kennedy	1.50	1.70
Garden Helps, by Hall .....	.75	.85
Ginseng, Kain's Book on .....	.75	.85
Grasses and How to Grow Them	2.00	2.10
Insects and Insecticides, by Weed	1.60	1.75
The Home Garden, by L. C. Johnson .....	.50	.60
Irrigation for the Farm, Garden and Orchard, by Stewart	1.50	1.70
Making a Living on an Acre, by Ritchey .....	.25	.35
Mushroom Culture, by American Spawn Co. ....	.35	.40
Manual of Tropical and Sub-Tropical Plants, by Popenoe	5.00	5.20
New Onion Culture, by Grenier .....	.75	.85
Peanut Culture .....	.75	.85
Potatoes, by Frazier	1.00	1.15
Pruning Manual, by Bailey	2.00	2.20
Roeding's Fruit Grower's Guide	1.50	1.65
Soils and Fertilizers (Illustrated), by Lyon	1.50	1.65
Spraying Crops, by Weed .....	.75	.85
Strawberry Culture, by A. S. Fuller .....	.40	.50
Sweet Potato Culture, by Fitz .....	.75	.85
Talks on Manures, O. by J. Harris	1.75	1.90
Tomato Culture, by Tracy .....	.75	.85

Look over the list of Agricultural books and send for the one that may aid you in your particular line.

READ WHAT OTHERS SAY

"I want to tell you how well pleased I am with your seeds. They come done up nicely in small bags and get here, (distance of 1,800 miles or over) in good shape. I like your catalog best of all. I receive many from near and far, but yours is the best, has the most complete description and directions of all varieties. It is the only catalog where I can find just what I want. Please send me another catalog as I promised mine to a friend.
CHAS. E. BRUNNER, Texas.

"I am sending this mail order so as to be sure to get your catalog next year. We have bought seeds at your store and have been very well satisfied. Your catalog is a boom to the amateur gardener. We are just starting and have been greatly helped by your book." MRS. J. H. JENSEN, Cal.

"I have your 1922 seed catalog. I consider it a very unusual, very interesting, and very valuable book. It is more than a catalog. Please put my name on your mailing list.
MISS EVELYN ELDRIDGE, Cal.

"Your catalog has put me wise to a lot of new ideas; I am now in a more confident mood."

FRANK H. WRIGHT, Oahu, T. H.

"Please accept my thanks for your letter of recent date containing much valuable information regarding tomato and potato culture. Your records will probably show that I have been a customer of yours for some ten years and I have always been well pleased with Aggeler and Musser seeds.
PAUL I. CASE, New Mexico.

A & M Seed Co. as Up-Builders

During our thirty years experience in building up the best types of vegetables and flowers suited to climatic conditions of Southern California and the Great Southwest we have developed some perfect types that have held leading place since their introduction many years ago.

The Pearl Cauliflower held the lead since 1899 and is growing more popular each year.

No vegetable in the history of the Southwest has so completely monopolized attention nor has any been of so great monetary value as the Los Angeles Market Lettuce that we introduced in 1906.

The vegetables that are of greatest value to the Southwest are those that originated here and all of the standard vegetables of great local value were discovered, bred up, standardized and introduced by Aggeler & Musser Seed Co.

Prior to 1907 we introduced the following named vegetables that are leaders to this day after a period of fifteen years:

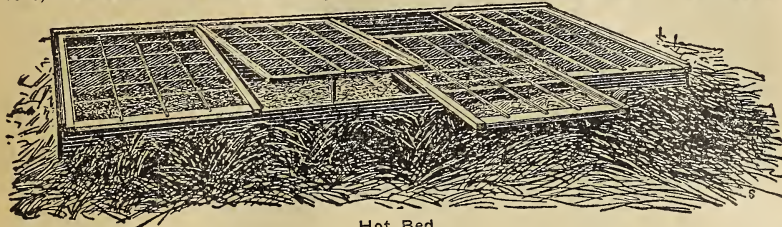
The Pearl Cauliflower, Oregon Evergreen Sweet Corn, Anaheim Chili Pepper, White Rose Potato, Hybrid Casaba, Chilian Water Melon, Ventura Wax Bean, Los Angeles Market Lettuce, Winnigstadt Cabbage, New Queen Onion and the Lemon Cucumber.

Since 1907 we have introduced the Angeleno and Klondike Watermelon, the Monstrous Lima Bean, the Improved Pimiento, Golden Beauty and Golden Hybrid Casabas, Italian Squash, Riverside Sweet Spanish Onion, White Seeded Kentucky Wonder Beans.

These have withstood the competition of other varieties and are standard because of their great economic value.

The Primer of Agriculture

The instructions on this page and next are so essential to the amateur and the new-comer that we repeat them from year to year. But each year brings out some new phase of agriculture, much of which we include in these columns; therefore, the reader will find something worth while that did not appear in last year's



Hot Bed

Every garden should have a hot bed in a sunny corner for the purpose of raising plants for early vegetables.

Dig a trench east and west twelve to eighteen inches deep. A bed three feet wide and ten feet long is large enough for any family garden. Board twelve inches high on the north side and six inches high on the south side. Fill twelve inches deep with straw, manure or weeds, moisten slightly, pack tightly, cover three inches deep with sandy loam; if the loam is mixed with some A. & M. Humus or leaf-mould, it will greatly improve it. One pound each of Toro sulphur and lime would fertilize the hot bed and do much toward destroying fungus and insects. Sow the seed in rows across the hot bed north and south, so that the sun will light both sides of the row during the day, making strong, healthy plants. Do not sow too thickly nor more deeply than one-fourth inch. Cover the hot bed with glass, not muslin. No less than twelve inches should exist between the glass and the soil. Sprinkle sufficiently to moisten the soil, but not enough to cool the manure, which would then become chilled and be worse than no manure at all. Raise the glass during the day, and close at night. Without ventilation the plants may be scalded during a warm sunny day. Before transplanting from the hot bed, all plants should be hardened by exposing them to the sun for several days. Exercise proper judgment lest they be destroyed.

THE SOIL

There are two kinds of soil in California that baffle the new gardener, and often puzzle the man of experience. One kind is the raw, unreclaimed soil that packs so hard that vegetation cannot take root. The other soil is as pliable as sand, and ought to grow anything but just will not. Both require the same solution. They need life (humus) and there is nothing better to put life into soil than a green manuring crop plowed under at the right time, and to thoroughly air the soil by cultivation.

For your garden gather weeds and dig them under. Any decaying vegetation plowed under will add humus. For the field, grow rye, vetch, melilotus, or barley during the winter months, and in the spring plant Hubam Clover and Cow Peas. All these crops will furnish feed for the stock as well as humus to the soil. Cover crops for green manuring should be plowed under a month before planting and before sowing any seed the field should be thoroughly irrigated and cultivated. If this is not done a dry crust will form over the humus.

To grow well a plant requires a deep, mellow, moist, soil, supplied with the right amount of air, heat and available plant food. An important step, then, in the successful growing of vegetables is to prepare the soil in such a way that it will be congenial to the best root growth. The soil for truck crops is a rich sandy loam—a soil containing varying proportions of clay, sand and organic matter. A good vegetable soil can be made in most back yards by intelligent management, and an application of two pounds each of Toro Sulphur and lime to every 100 square feet.

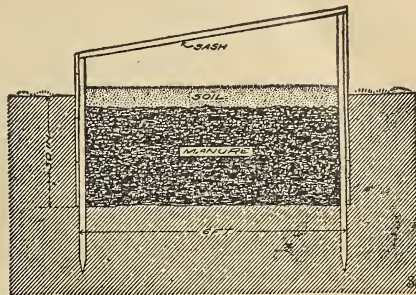
Clay and Adobe Need Skill

Of all the garden soils, clay is the most easily injured by tilling when it is not in the right condition as to moisture. If worked too wet, the particles all slide together into a compact mass. On the other hand, if worked too dry, the clods are hard to break. When clay soil is in the right condition to work it will crumble apart if squeezed in the hand. If it sticks together it is too wet. Clay soil should never be worked when it is wet, not even with a hoe. This is an important lesson for all gardeners.

In a deep, mellow soil, the plants grow more quickly, since larger root systems can be developed and more food and moisture absorbed. A deep, mellow soil affords a larger reservoir to hold rain needed during the droughts that come in the growing season. Such a soil is warmer and contains air needed for the growing roots and for the bacteria that cause decay of organic matter or gather nitrogen from the soil air.

A Compost Pit

Make a pit about 12 inches deep in some out-of-the-way place in the home garden. Put into it every particle of vegetation that will decay. When cleaning up burn only sticks that will not decay readily, but put the ashes into the pit with the compost. Turn the compost over with a fork and sprinkle with water whenever it shows signs of heating. This compost is valuable fertilizer, therefore do not neglect the Compost Pit.



Hot Bed, Cross Section

A Word About Sowing Seeds

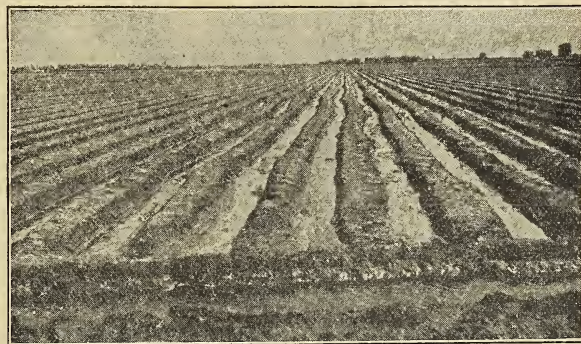
Many seeds are small and the germination weak, therefore sow them very shallow, often not more than one-eighth inch deep. This is because the germ or sprout must have air and light. If this is denied by too deep sowing, it dies before it reaches the surface. Cover the seed with A. & M. Humus.

In order to assist small or weak seeds to grow, it is advisable to plant plentifully, because the many seeds will give strength to raise the soil where one could not do so.

This advice applies particularly to beet and melon seeds, but it is applicable to all small seeds. It is easy to thin out the surplus plants. A good general rule is to plant seeds to a depth equal to from three to five times their diameter, make ridges to stand about six inches high, flattened to about ten inches wide on top and twelve inches between ridges. Drill the seed or transplant on each side of the ridge. Irrigate in the furrow between the ridges. By this method two ridges are irrigated with one furrow, and you will have only one furrow to cultivate after each irrigation. It is easy to see the advantage of this method over the usual way of drilling on level ground and irrigating each row, often flooding the plant, which is harmful, particularly during the heat of the summer. (See illustration).

A Few Words About Irrigation

In seed beds where small seeds are sown thickly, it is necessary to sprinkle the beds, never flood them. During the winter months, sprinkle only in the morning when the water is warmer than the dew. This allows all the heat that accumulates in the soil during the day to be retained far into the night. During the hot summer months, it will be necessary to sprinkle in the evening to revive the plants after a hot day.



Irrigating Sweet Potatoes or Other Crops

When making a garden, whether for drilling or planting seed, or setting plants, always wet the ground thoroughly. GIVE IT A GOOD SOAKING DOWN TO SUB-MOISTEN. As soon as it is tillable—that is, as soon as it can be spaded and pulverized, or when the soil will not stick to the spade, dig it ten or twelve inches deep, put compost into every other furrow and turn it under. This is needed for humus and fertilizer, either in sandy or loamy soil, and more especially in adobe soil. Pulverize the soil thoroughly and rake it evenly. While it is still moist, plant seed from one-fourth inch to one inch deep, in heavy soil, and a little deeper in sandy soil. Planted this way, almost any variety of seed will germinate and show above the ground in from four to ten days, with irrigation. Never sprinkle in a new garden before the plant is above ground, nor after if you can irrigate between the rows. It is far better to irrigate than to sprinkle, and much less labor. Always mulch the soil after each irrigation, as soon as it mulches readily, but no sooner. To allow the soil to bake after irrigation is far worse than no irrigation at all.

To sprinkle the garden slightly each day during the summer months is of little value unless the ground is also thoroughly irrigated once each week or two, according to the nature of the soil. Slight sprinkling refreshes the foliage, but may not penetrate the soil more than one inch deep. Thus as the under soil dries, the roots get no moisture. The plants suffer, and you do not suspect the cause because you sprinkle each day. This is a common fault and the cause of many failures.

Owing to the diversity of the soil and climatic conditions of the great Southwest, it is impractical to follow without some deviation any table that might be formulated. We believe this table is as nearly correct as any table can be made, yet the time of planting must vary with each season, and so seldom are the seasons at all similar that there is always an element of risk for the man who plants early. Each month, too, requires certain varieties best suited to the season and purpose for which it is planted.

VEGETABLE CALENDAR FOR THE HOME GARDEN

VARIETY	NO. OF PLANTS PER OUNCE OF SEED	SEED FOR 50 feet	ROWS APART	APART IN ROWS	TIME OF PLANTING	READY FOR USE
Artichoke	200	12 plants	4 ft.	4 ft.	Dec. to April	5 mo.
Asparagus	150	50 roots	20 in.	1 ft.	Dec. to April	2nd spring
Beans, Bush	50 to 100	2 pkts.	2 ft.	6 in.	March to Sept.	8 to 12 wks.
Beans, Pole	50 to 100	2 pkts.	3 ft.	12 in.	April to Aug.	10 to 12 wks.
Beans, Lima	30 to 60	1/4 lb.	2 ft.	10 in.	April to Aug.	12 to 14 wks.
Beets	300	1 pkt.	10 in.	6 in.	All year	10 to 12 wks.
Cabbage	2000	36 plants	20 in.	15 in.	All year	14 to 16 wks.
Carrot	1500	1 pkt.	10 in.	Sow	All year	8 to 10 wks.
Cauliflower	2000	30 plants	20 in.	18 in.	Sept. to March	14 to 16 wks.
Celery	100	100 plants	20 in.	6 in.	March to Aug.	16 to 18 wks.
Corn, Sweet	200	1 pkt.	2 ft.	18 in.	March to Aug.	10 to 12 wks.
Cucumber	200	1 pkt.	4 ft.	3 ft.	March to Sept.	10 to 12 wks.
Endive	1000	1 pkt.	10 in.	10 in.	Sept. to March	14 to 18 wks.
Eggplant	500	24 plants	2 ft.	2 1/2 ft.	April to July	10 to 12 wks.
Kale	1000	30 plants	2 ft.	18 in.	All year	8 to 10 wks.
Kohl Rabi	1000	1 pkt.	10 in.	Sow	All year	10 to 12 wks.
Lettuce	200	1 pkt.	15 in.	10 in.	All year	12 to 16 wks.
Musk Melon	200	1 pkt.	4 ft.	3 ft.	March to July	14 to 18 wks.
Water Melon	100	1 pkt.	6 ft.	4 ft.	March to July	16 to 20 wks.
Okra	150	1 pkt.	2 ft.	18 in.	April to July	10 to 12 wks.
Onion Seed	500	1 pkt.	10 in.	Sow	All year	24 to 28 wks.
Onion Sets		1 lb.	10 in.	3 in.	All year	14 to 18 wks.
Parsnips	300	3 lb.	2 ft.	Drill	Aug. to March	14 to 18 wks.
Parsley	400	1 pkt.	10 in.	Sow	All year	12 to 14 wks.
Pepper	1000	30 plants	20 in.	18 in.	April to July	10 to 12 wks.
Potatoes		5 lbs.	2 ft.	1 ft.	March to Aug.	10 to 14 wks.
Sweet Potatoes		50 plants	3 ft.	3 ft.	April to July	10 to 12 wks.
Pumpkin	100	1 pkt.	3 ft.	5 ft.	April to July	12 to 14 wks.
Peas	50	1/4 lb.	2 ft.	Sow	Sept. to March	14 to 20 wks.
Radish	500	1 pkt.	10 in.	Sow	All year	4 to 8 wks.
Rhubarb Roots		24 roots	3 ft.	2 ft.	Dec. to March	8 to 10 wks.
Roselle	150	1 pkt.	3 ft.	2 ft.	April to May	18 to 20 wks.
Salsify	200	1 pkt.	10 in.	Sow	Sept. to March	14 to 18 wks.
Spinach	200	1 pkt.	12 in.	Sow	Sept. to April	8 to 12 wks.
Squash, Summer	100	1 pkt.	3 ft.	3 ft.	April to Aug.	10 to 12 wks.
Squash, Winter	100	1 pkt.	6 ft.	4 ft.	April to Aug.	12 to 16 wks.
Tomato	1000	18 plants	4 ft.	3 ft.	March to Aug.	12 to 14 wks.
Turnip	2000	1 pkt.	10 in.	Sow	Sept. to March	10 to 12 wks.

The soil should be Moist enough at time of planting to germinate the seed without irrigation. The depth of planting in heavy soil should be from 1/4 in. for very small seed to 1 in. for beans and peas, in sandy soil the seed may be planted from 1/2 in. to 2 inches.
In frostless sections the time of planting summer crops may be advanced a full month.

VEGETABLE CALENDAR FOR FIELD PLANTING

VARIETY	SEED PER ACRE	ROW APART	APART IN ROW	WHEN TO PLANT	TIME TO MATURE	APPROXIMATE YIELD AND VALUE PER ACRE
Artichoke	1 lb.	5 ft.	4 ft.	Oct. to Jan.	18 to 20 wks.	
Asparagus—roots	11000	4 ft.	1 ft.	Dec. to Feb.	1 year	
Asparagus, seed	3 lbs.	2 ft.	Drill	Feb. to March	2 years	
Beans, bush	40 lbs.	2 ft.	Drill to 6 in.	March to Aug. 1st	8 to 12 wks.	3 tons \$300
Beans, pole	30 lbs.	3 ft.	12 in.	April to July 1st	10 to 12 wks.	4 tons 400
Lima, bush	50 lbs.	3 ft.	Drill to 6 in.	April to Aug. 1	10 to 12 wks.	4 tons 400
Lima, pole	40 lbs.	4 ft.	12 in.	April to Aug. 1	12 to 14 wks.	4 tons 400
Beets, table	10 lbs.	Double row	Drill	All Year	10 to 12 wks.	12 tons 400
Beets, stock	7 lbs.	16 in.	Drill	Oct. to May 1	14 to 18 wks.	20 tons 200
Carrots, table	3 lbs.	Double row	Drill	All year	10 to 12 wks.	12 tons 300
Carrots, stock	4 lbs.	16 in.	Drill	Oct. to May 1	12 to 18 wks.	18 tons 200
Cabbage, plants	8000	30 in.	18 in.	All year	14 to 16 wks.	12 tons 200
Cabbage, seed	5 oz.	8 in.	Drill	All year	20 to 26 wks.	12 tons 200
Cauliflower, plants	7000	3 ft.	2 ft.	May to Feb. 1	14 to 16 wks.	
Cauliflower, seed	5 oz.	8 in.	Drill	May to Feb. 1	20 to 24 wks.	500 doz. 250
Celery, plants	30,000	30 in.	6 in.	March to Aug. 1	16 to 18 wks.	
Celery, seed	1/4 lb.	8 in.	Drill	March to Aug. 1	24 to 26 wks.	2000 doz. 600
Corn, Sweet	19 lbs.	30 in.	18 in.	March to Aug. 1	10 to 12 wks.	400 box 150
Cucumbers	2 lbs.	4 ft.	3 ft.	March to Sept. 1	10 to 12 wks.	600 box 200
Chicory—Endive	2 lbs.	Double row	Drill and thin to 10 in.	Sept. to Feb. 1	14 to 18 wks.	2000 doz. 600
Eggplant, plants	7,000	3 ft.	2 ft.	April to July 1	10 to 12 wks.	
Eggplant, seed	1/2 lb.	Hot bed	8 in.	Dec. to Feb. 1	18 to 20 wks.	10 tons 600
Kale	1/2 lb.	3 ft.	Drill	Sept. to March 1	8 to 10 wks.	
Kohl Rabi	2 lbs.	Double row	Drill	Sept. to March 1	10 to 12 wks.	12 tons 300
Lettuce	2 lbs.	Double row	Drill and thin to 10 in.	All year	12 to 15 wks.	500 crates 500
Musk Melon	1 lb.	6 ft.	5 ft.	March to July 1	14 to 18 wks.	400 crates 200
Water Melon	1 lb.	9 ft.	8 ft.	March to June 1	16 to 20 wks.	15 tons 150
Casaba	1 lb.	8 ft.	8 ft.	March to July 1	16 to 20 wks.	12 tons 300
Okra	6 lbs.	3 ft.	18 in.	March to Aug. 1	10 to 12 wks.	400
Onion Seed	2 lbs.	Double row	Drill	Sept. to April 1	24 to 28 wks.	200 crates 200
Onion Sets	250 lbs.	Double row	4 in.	Dec. to Feb. 1	14 to 18 wks.	
Parsley	4 lbs.	Double row	Drill	Aug. to April 1	12 to 14 wks.	
Parsnip	5 lbs.	2 ft.	Drill	Aug. to March 1	14 to 18 wks.	400 sks. 200
Peas	50 lbs.	3 ft.	Drill to 6 in.	Sept. to March 1	14 to 20 wks.	4 tons 400
Pepper, plant	9,000	3 ft.	18 in. or drill seed in.	April to June 1	10 to 12 wks.	
Pepper, seed	1/2 lb.	Hot bed	field and thin to 18 in.	Jan. to April 1	18 to 20 wks.	10 tons 200
Potatoes, Irish	600 lbs.	3 ft.	1 ft.	Feb. to Sept. 1	10 to 14 wks.	100 sks. 150
Potatoes, Sweet, plants	12,000	3 ft.	1 ft.	April to July 1	10 to 12 wks.	
Potatoes, Sweet, seed	400 lbs.	Hotbed		Jan. to Feb. 1	18 to 20 wks.	150 sks. 300
Pumpkin	1 lb.	10 ft.	10 ft.	April to July 1	12 to 14 wks.	20 tons 100
Radish	12 lbs.	Double row	Drill	All year	4 to 8 wks.	400
Rhubarb, roots	5,445	4 ft.	2 ft.	Sept. to April 1	8 to 10 wks.	400
Rhubarb, seed	1/2 lb.	Double row	Drill	Jan. to April 1	16 to 20 wks.	
Roselle	3 lbs.	5 ft.	3 ft. thin to 1 plant	April to May	18 to 20 wks.	500
Spinach	12 lbs.	Double row	Drill to 6 in.	Oct. to April 1	8 to 12 wks.	8 tons 150
Squash, Summer	2 lbs.	4 ft.	3 ft.	March to Aug. 1	10 to 12 wks.	300
Squash, Winter	1 lb.	8 ft.	6 ft.	April to Aug. 1	12 to 14 wks.	12 ton 200
Salsify	6 lbs.	Double row	Drill	Sept. to April 1	14 to 18 wks.	8 tons 300
Tomato Plants	1,200	6 ft.	6 ft.	March to Aug. 1	12 to 14 wks.	10 ton 150
Tomato, seed	1 oz.	Hot bed, Jan.	Out door drill 10 in.	March to June 1	18 to 20 wks.	
Turnip	2 lbs.	Double row	Drill	All year	10 to 12 wks.	12 tons 200

CALENDAR FOR FORAGE AND GRAIN CROPS

VARIETY	SEED PER ACRE	HOW TO PLANT	FORAGE	YIELD GRAIN LBS.
Clover Alfalfa	20 lbs.	Broadcast	6 to 8 tons	600
" Alba	15 lbs.	Broadcast	8 to 10 tons	800
" Indica	20 lbs.	Broadcast	Cover crop	.....
" Hubam	10 lbs.	Broadcast	Cover crop	600
" Burr	15 lbs.	Broadcast	Cover crop	.....
Grain, Barley	80 lbs.	Drill	2 to 4 tons	2500
" Wheat	60 lbs.	Drill	2 tons	2000
" Oats	80 lbs.	Drill	3 tons	2000
" Rye	60 lbs.	Drill	.....	2000
" Flax	30 lbs.	Drill	Fibre	2500
" Buckwheat	30 lbs.	Drill	Cover crop	1500
" Hemp	30 lbs.	Drill	Fibre	2000
" Canary	40 lbs.	Drill	.....	2000
" Rice	80 lbs.	Drill	.....	3000
Corn	40 lbs.	Drill in rows 3 ft. apart	4 tons, dry	3000
" Ensilage	40 lbs.	Drill in rows 30 in. apart	20 tons	.....
" Broom	6 lbs.	Drill in rows 30 in. apart	2 tons, dry	2000
" Pop	6 lbs.	Drill in rows 30 in. apart	2 tons, dry	1500
" Egyptian	6 lbs.	Drill in rows 30 in. apart	2 tons, dry	2500
" Milo	6 lbs.	Drill in rows 30 in. apart	2 tons, dry	4000
Sorghum	8 lbs.	Drill in rows 30 in. apart	15 tons, green	.....
Wander Forage	5 lbs.	Drill in rows 30 in. apart	20 tons, green	2000
Cow Peas	25 lbs.	Drill in rows 30 in. apart	Cover crop	1500
Broad Windsor	100 lbs.	Drill in rows 30 in. apart	Cover crop	2500
Cotton	5 lbs.	Drill in rows 4 ft. apart	1 to 1½ Bale	.....
Vetch	30 lbs.	Drill in rows 1 ft. apart	Cover crop	888
Millet	20 lbs.	Drill in rows 1 ft. apart	4 tons hay	2000
Sunflower	5 lbs.	Drill in rows 3 ft. apart	.....	2000
* Grass Rye	20 lbs.	Broadcast	Pasture Mixture	.....
* Bermuda	20 lbs.	Broadcast	Pasture Mixture	.....
* Paspalum	20 lbs.	Broadcast	Hay or pasture	.....
* Rhodes	12 lbs.	Broadcast	Hay or pasture	.....
* Sudan	12 lbs.	Drill in rows 1 ft. apart	12 tons hay	.....
* Harding	10 lbs.	Broadcast or drill	Hay or pasture	.....
* Alfilaria	10 lbs.	Broadcast	Pasture	193
* Orchard	25 lbs.	Broadcast	Pasture Mixture	170
* Red Top	14 lbs.	Broadcast	Pasture Mixture	150
* Brome	20 lbs.	Broadcast	Pasture Mixture	150
* Fescue	20 lbs.	Broadcast	Pasture Mixture	134
* Smilo	5 lbs.	Broadcast	Pasture Mixture	120
* Kentucky Blue	50 lbs.	Broadcast	Hay or pasture	108
			Pasture Mixture	69
				48
				40
				27
				17
				12
				10

* Used also for Lawns and Golf Links.

NAMES OF VEGETABLES IN FOREIGN LANGUAGES

English	French	Italian	Polish	German	Spanish	Scandinavian
Asparagus	Asperge	Sparagio	Szparagi	Spargel	Esparrago	Asparges
Beans	Haricots	Fagioli	Fasola	Bohnen	Habichuela	Boenner
Beet	Betterave	Barbabietola	Buraki	Rube	Remolacha	Roedbede
Cabbage	Chou	Cavolo Cappuccio	Kapusta	Kopfkohl	Col repello	Kaal
Carrot	Carotte	Carota	Marchow	Carotten	Zamhoria	Gulerod-Karroter
Cauliflower	Chou-fleur	Cavolfiore	Kalaflory	Blumenkohl	Coliflor	Blomkaal
Celery	Celeri	Sedano	Selery	Sellerie	Apio	Selleri
Corn	Mais	Mais	Kukurydza	Mais	Maiz	Mais
Cucumber	Concombre	Cetriolo	Ogorek	Gurken	Cohombro	Agurk
Dandelion	Dandelion	Dente di leone	Papawa	Lowenzahn	Diente de leon	Loevetand
Eggplant	Aubergine	Petronciano	Gruszka	Eierpfanze	Berengena	Esplante
Endive	Chicoree	Endiva	Endyvia	Endivien	Endivia	Endivie
Kale	Chou vert	Cavolo verde	Solanka	Blatterkohl	Breton, Berza	Groenkaal
Kohlrabi	Chou-rave	Cavolo rapa	Kalarepa	Knollkohl	Col Rabano	Kaalrabi
Leek	Poireau	Porro	Pory	Porree	Puerro	Purre
Lettuce	Laitue	Lattuga	Salapa	Salad	Lechuga	Salat
Melon, Musk	Melon	Popone	Melon	Melone	Melon	Melon
Melon, Water	Melon d'eau	Melone d'aqua	Melon, Wodny	Wasser-Melone	Sandia	Vandmelon
Mushroom	Champignon	Fungo Pratajolo	Grzyb	Schwamm	Seta	Champignon
Okra	Gombaud	Oera	Ocher	Ocher	Gombo	Hibiskus
Onion	Ognon	Cipolle	Cebula	Zwiebel	Cebolia	Roedloeg
Parsley	Persil	Prezzenolo	Pietruszka	Petersilie	Perejil	Persille
Parsnip	Panais	Pastinaca	Pasternak	Pastinake	Chirivia	Pastinak
Peas	Pois	Pisello	Groch	Erbisen	Guisante	Erter
Pepper	Piment	Peperone	Pieprz	Pfeffer	Pimiento	Spanak Peper
Pumpkin	Potiron	Zucca	Bania	Melonen-Kurbiss	Calabaza Tonanera	Graeskar
Radish	Radis	Ravanello	Rzodkiew	Radies	Rabanito	Reddik-Radis
Salsify	Salsifis	Sassefrica	Jarzy Ostryga	Haferwurz	Salsifi	Havrerod
Spinach	Epinard	Spinace	Szpinak	Spinat	Espinace	Spinat
Squash	Courge	Zucca	Miekurz	Kurbiss	Calabaza	Squash-graeskar
Swiss Chard	Poiree	Bieta	.....	Beisskohl	Bleda	Blad bede
Tomato	Tomate	Pomo d'oro	Pomidor	Liebesapfel	Tomate	Tomat
Turnip	Navet	Navone	Rzepa brukiew	Weisse-Rube	Nabo	Turnips

Number of Plants to Acre
Set at Regular Distances Apart

DISTANCE APART	NO. PLANTS
1 ft. by 6 in.	87,120
2 ft. by 6 in.	43,560
2 ft. by 12 in.	26,780
2 ft. by 18 in.	14,520
2½ ft. by 12 in.	17,420
2½ ft. by 18 in.	11,616
2½ ft. by 2 ft.	8,712
3 ft. by 1 ft.	14,520
3 ft. by 1½ ft.	9,924
3 ft. by 2 ft.	7,260
3 ft. by 3 ft.	4,840
4 ft. by 1 ft.	10,890
4 ft. by 2 ft.	5,445
4 ft. by 3 ft.	3,630
4 ft. by 4 ft.	2,722
5 ft. by 1 ft.	8,712
5 ft. by 2 ft.	4,356
5 ft. by 3 ft.	3,904
5 ft. by 4 ft.	2,178
5 ft. by 5 ft.	1,742
6 ft. by 3 ft.	2,420
6 ft. by 4 ft.	1,815
6 ft. by 6 ft.	1,200
7 ft. by 7 ft.	888
8 ft. by 8 ft.	680
9 ft. by 9 ft.	537
10 ft. by 10 ft.	435
11 ft. by 11 ft.	360
12 ft. by 12 ft.	302
14 ft. by 14 ft.	222
15 ft. by 15 ft.	193
16 ft. by 16 ft.	170
17 ft. by 17 ft.	150
18 ft. by 18 ft.	134
19 ft. by 19 ft.	120
20 ft. by 20 ft.	108
25 ft. by 25 ft.	69
30 ft. by 30 ft.	48
33 ft. by 33 ft.	40
40 ft. by 40 ft.	27
50 ft. by 50 ft.	17
60 ft. by 60 ft.	12
66 ft. by 66 ft.	10

Rule.—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and product will be the number of square feet for each plant or hill; which divided into the number of square feet (43,560), will give the number of plants to the acre.

Average Time Required
for Seeds to Sprout

Bean	5-10 days
Beet	7-10 "
Cabbage	5-10 "
Carrot	12-18 "
Cauliflower	5-10 "
Celery	5-20 "
Corn	5-8 "
Cucumber	6-10 "
Lettuce	6-8 days
Onion	7-10 "
Pea	6-10 "
Parsnip	10-20 "
Pepper	9-14 "
Radish	3-6 "
Tomato	6-12 "
Turnip	4-8 "

Plant radishes with slow vegetables to mark the rows for cultivation.



Warehouse No. 1, Shipping Department



Warehouse No. 2, Stacks of Alfalfa Seed

A & M Reliable Seeds

A & M Seeds have wide distribution throughout the country, being handled by live dealers.

By purchasing packet seeds from our case as shown in the illustration, you are buying the same high quality as is furnished at our store.

The dealers who carry our seeds in packets endeavor to handle a complete line but in the event that they do not have on hand the kinds you wish when making your purchase, they will be delighted to get the seeds for you.

A & M PACKET SEEDS ARE NEVER CONSIGNED.



Look For This Case at Your Local Dealer's.

Home Garden Suggestion

Heretofore we have offered home garden collections, but they have not proven practical because few home gardens could accommodate the entire collection and few customers wanted everything offered on the list.

Therefore, we have listed on this page a collection of our home garden favorites. You may select what you want.

If you will select your home garden seeds from this list you will have made a good start toward success. Be sure to follow cultural instructions.

Home Garden Favorites. Per Pkt. 10c.

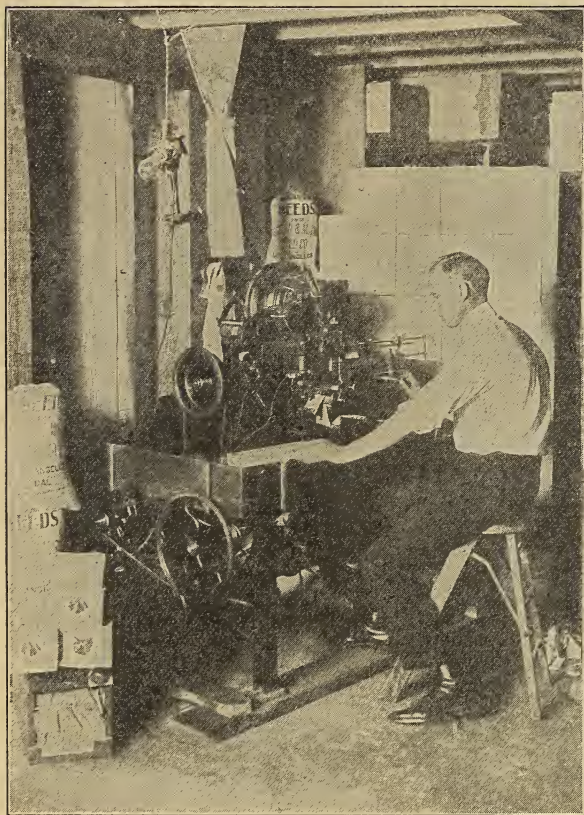
Asparagus	Argenteuil
Beans	{ Kentucky Wonder
	{ Stringless Green Pod
	{ Fordhook Lima
	{ Monstrous Lima
Beets	Detroit Dark Red
Chard	White Swiss
Cabbage	{ Glory of Enkhuizen
	{ Chinese
Cauliflower	Ex. Early Calif. Pearl
Carrots	Chantenay
Celery	Golden Self-Blanching
Sweet Corn	{ Country Gentleman
	{ Oregon Evergreen
Cucumber	Klondike and Lemon
Kale	Tall Scotch
Lettuce	Iceberg (Spring Planting)
Mustard	Los Angeles Market (Fall Planting)
Casaba	Ostrich Plume
	Golden Hybrid
Muskmelon	{ Persian
	{ Tip Top
	{ Klondike
	{ Chilian
Watermelon	{ Angeleno
	{ Winter Melon
Onion	Only One—The Riverside Sweet Spanish
Peas	{ Admiral
	{ Nott's Excelsior
Pepper	Chinese Giant
Potato	White Rose
Radish	{ Icicle
	{ Scarlet Turnip
Roselle	
Rhubarb	Wagner's Giant
Squash	{ Winter Banana
	{ Zucchini
	{ White Bush
Tomato	{ Ponderosa
	{ Home if a trellis is used

Every packet contains enough seed to grow more vegetables of its kind than the average family can consume in a season. For complete description and cultural instruction of these items, read this catalog.

A Suggestion

When you have more plants than you want, sell or give to your neighbors. Do not waste!

Each season some one in every community has neglected to grow plants for their garden, often with the idea that they will need only half a dozen each of several kinds and they can be bought cheaper than they can be grown; all of which is very true. Therefore let us suggest that when you are reading this catalog preparatory to making up your order for seeds take into consideration that many of your neighbors will want some plants. So if you hesitate to order a packet of this or that because three or four plants are all you need, just consider that your neighbor will want some; it will not be much trouble to grow them along with other things, and you or your boy may make a little money with which to buy United States Treasury Saving Certificates, or Thrift Stamps, and at the same time increase food production



THE SEED PACKET FILLER

We have installed a Seed Packet Filling Machine. With this machine we can fill 60,000 packets per day.

"We have had a nice patch of winter garden on our lot here grown from your seeds bought in the local store. Radishes, lettuce, carrots, turnips and beets all doing fine. (Signed) MRS. ANDREW WHITE, Corona, Calif."

Mr. E. M. Ehrhorn, of Honolulu, writes as follows: "I wish to congratulate you upon the efficient way in which your packages are put up. They arrive in Honolulu in perfect shape, which is in favorable contrast with the deplorable condition of packages from many other houses."

"Last year we used your seeds and never lost a single seed, and it was our first attempt at gardening. Your seeds are A-1 and cannot be beat. Don't forget to send me the 1922 catalog, as we can't get along without it.

"MRS. CARL SCHAFER."

A&M
reliable
SEEDS

Aggeler & Musser Seed Co.'s

Vegetable Seeds are the Standard Seeds of the Southwest

A&M
reliable
SEEDS

The vegetables grown from A. & M. Seeds are the standard vegetables at every market in which they appear. SEEDS PLANTED OUT OF SEASON, OR IN UNCONGENIAL SOIL MEANS LOSS TO THE GROWER.

Proper Selection

We have endeavored in this catalog to offer only the best and most popular varieties. A duplication only confuses the customer. From our own long experience we can well determine what varieties are the best for each particular purpose, therefore, throughout the catalog you will find, not a long list of things, but only the best which is suited to each purpose; the one that will bring the most profit to the market gardener, or the best results in the family garden. You need look no further. Read our descriptions and recommendations, and select the seed suited to your conditions.

SUGGESTIONS FOR A CALIFORNIA GARDEN ON A CITY LOT

You have just moved into a new home of your own; you have not much time for gardening, yet you wish to get the most out of the small space. Read in this catalog about the preparation of the soil, then purchase A. & M. seeds according to the season. Plant seeds properly and with ordinary culture you will be eating radishes within three weeks, followed in succession by green onions, cucumbers, spinach, beans, beets, lettuce, carrots, sweet corn, peppers, and tomatoes. Have a few plants of rhubarb, a bed of asparagus about 10'x10' will afford enough for a small family. Plant spinach and rhubarb in shady places. If you have a city lot, have a garden; you can grow \$100.00 worth of better vegetables than you can buy.

Read

This Catalog comprises a list of all vegetables and farm seeds offered by us, all of which have been tried and proven to be adapted to climatic conditions of the Southwest and Mexico. BUT always have in mind, each season, even each month requires not only different varieties of seed, but different strains of the various varieties. For instance, Los Angeles Market Lettuce is the best of all when planted from August 1st to February 1st, but planted at other times is very inferior, while Romaine and Iceberg Lettuce are best suited to the Summer months. This applies only to the climate of the Southwest. What is true of lettuce will apply also to beans, melons, onions and many other vegetables.

Thus by years of attention to this work we have classified each variety of vegetable according to its best adaptation with regard to soil and climate. The result is that our growers have fewer crop failures.

QUICK SERVICE

We aim to give the best service possible at the counter, and in order to do so we must ask your co-operation to the extent that you will have your order ready when you come into the store.

During the planting season there are many customers waiting, and competent clerks are scarce. It is for your protection that we have only experienced seedsmen behind the counter; therefore, be considerate and have your order ready.

OUR CALL DESK

This has proven to be just what was needed to round out the efficiency of our retail store. Anyone contemplating a trip to town may now write or phone their order and it will be ready for them at the call desk when they ask for it.

Leave your order when you come to town. It will be ready when you call for it.

Get Your Name on Our List

Be sure to send an order for seeds so that your name will continue on our mailing list. You will then receive our next catalog as soon as it is from the press:

THE SEED CATALOG

MR. PLANTER, WIFE AND CHILDREN

Without your asking I come to you as a silent friend bringing you much valuable information with regard to your affairs and offering suggestions that may prove valuable to you at the proper time. If you are a newcomer or a beginner I tell you how to make your garden, what seeds to plant, when and how to plant them. My pages hold something of interest to every planter. If you have a home garden or a large ranch you will need seeds, fertilizers, insecticides and information about them.

You surely have a home and you will want a beautiful lawn and flowers to make it attractive every day in the year. You will find all necessary information on my pages with hundreds of illustrations.

You will find some use for me every day in the year. Hang me on a nail so I will not get lost, and don't forget, when you need Seeds, Fertilizers, Insecticides, Garden Tools, Bulbs, Birds, or information concerning these just see me or write to—

AGGELER & MUSSER SEED CO.,
Los Angeles, Cal.

A WORD ABOUT GROWING PLANTS

First the soil should be thoroughly pulverized and enriched moderately, using sheep manure sparingly. If available, horse or cow manure may be used more freely.

Sow the seed in rows north and south and eight or ten inches apart. This permits air and sunlight on both sides of the plant to make them strong and hardy.

Usually for convenience, plant beds are six feet wide and as long as need be.

From the time the seed is sown until the plants are set out the seed bed will need sprinkling, at first twice a day and always once a day. Usually this frequent sprinkling packs the soil, or if the soil is clay or adobe, it bakes so that the seed cannot germinate or the tender sprout cannot penetrate it. This is probably the most potent cause of seed bed failures.

To avoid such failures we find that to cover the seed one-fourth inch deep with nothing but A & M Humus, (a pulverized peat) and sprinkle with a very fine spray to avoid washing. The Humus holds the moisture and prevents baking; the seeds germinate quickly and make rapid growth. Horse manure also makes a good mulch for this purpose.

These instructions apply also to hot-beds and cold frames. But where large seed beds are made in checks to permit of flooding, it is not advisable to use Humus as a cover, but it should be worked into the soil.

A & M Humus is a good soil conditioner.

ARTICHOKE

Green Globe (Half-Moon Bay Type)

REMARKS: The early artichoke brings a high price; but Southern California climate does not produce them early enough to get this high price, therefore we do not advise planting more than ¼ acre for local market.

The best way to get a good artichoke is to secure plants from old stalks of some good strain, as seeds cannot be depended upon to produce any certain variety. One-half dozen is enough for a family garden.

Transplant five feet apart in rows seven feet apart. When the young plants are attacked by aphids spray with "Black Leaf 40." About the time the buds are well advanced the under leaves become a harbor for flies and aphids and ants. When this occurs break off all the under leaves, clear the ground of all rubbish and spray with "Black Leaf 40" and use ant poison. See Insecticide page. You will then have a long season of large, clean buds.

(Pkt. 10c) (oz. \$1.20) (¼ lb. \$4.00) (lb. \$12.00) postpaid.

Jerusalem Artichoke

REMARKS: There is only a limited market for the Jerusalem Artichoke because it is little used for human food, and because of its perishable nature it is advisable that you grow only for your own use.

A border of Artichoke serves as an effective windbreak.

It is a most valuable food for hogs. It is said by many hog raisers that a hog fed on artichokes has never been known to have cholera. They grow to perfection here, yielding as much as 500 sacks per acre. They are grown from tubers the same as Irish potatoes. It requires 300 lbs. to plant an acre. Cut the tubers to single eyes. Plant during March and April two feet apart, in rows three feet apart. Let them grow until fall and allow the hogs to harvest the crop. The tubers are excellent for table use boiled as potatoes or parboiled and pickled in vinegar.

(Per lb. 25c) postpaid. Write for quantity price.

A & M Asparagus

490 Carloads of Asparagus, Worth More Than \$500,000 Were Shipped Out of California in 1920
California Has 17,444 Acres Planted to Asparagus, Five Times as Much as the Next Highest State.

Write U. S. Dept. of Agriculture for Farmers' Bulletin No. 820, "Asparagus."

REMARKS. No vegetable is more healthful or more palatable than the tender asparagus that appears on the table very early in the spring.

Every home garden should have a bed about ten by twenty feet, planting about one hundred roots. This would furnish enough tips from day to day to supply the family table.

Set the rows two feet apart instead of four as for field culture.



A No. 1 Field of Asparagus, Older Than 25 Years

Culture for Field Planting

Drill the seed thinly in rows ten inches apart in your seed bed during March and April.

Transplant about January 1st, setting the roots twelve inches apart in furrows 4 feet apart and twelve inches deep.

Cover with two or three inches of soil, and on top of that three or four inches of well rotted manure thoroughly mixed with soil. This is sufficient for the first season and will produce a marketable crop the following April, possibly March. Continue cutting until the sprouts become too small for the kitchen. Then allow them to grow to full size and spray the whole thoroughly with powdered sulphur during August, using only the best grade. This is to prevent or destroy any mildew, red spider or rust. In November cut the stalks close to the ground and burn them. Cover the rows in hills like the picture. With proper hoeing and culture the asparagus rows will bear profitably for many years. Three pounds of seed will grow plants sufficient for one acre.

Market: A large acreage is grown for canneries, and in sections where it can be produced very early it is grown for Eastern markets. It is also very profitable to grow for local market.

Use one year old roots; do not cut them back. When planting see that the roots are well spread out so that the soil will touch every part. If this is not done the plant cannot thrive.

Washington Rust-Resistant Asparagus

This new pedigreed rust resistant variety was bred up by the United States Bureau of Plant Industry co-operating with the Massachusetts Agricultural Experiment Station covering a period of fourteen years. The name Washington was applied because the original or first acceptable rust proof male plant was given that name and all subsequent prodigies are identified by that name. (Pkt. 10c) (oz. 70c) (¼ lb. \$2.00) (lb. \$6.00) postpaid.

Mary Washington This is the latest introduction of the rust resistant varieties and the best with the advantage over all other varieties of being earlier which means so much to the grower. Seed is very scarce. Per (Pkt. 25c) (oz. \$2.50) (¼ lb. \$7.50) (lb. \$20.00) postpaid.

Read some of the compliments that have come to us during the season just past:

"During the few years we have lived in California, we have used your seeds, and considered ourselves fortunate in the beginning, to have been loaned one of your catalogs. Of all the ones I have seen in my life time, it is certainly the best. Most seed houses do not show the concern for the success of their patrons that you do. It is especially helpful to the rapidly increasing population of eastern people, who are apt to fail under the different conditions here. Have long intended to express my appreciation of your catalog but just neglected to take the time. CURTIS SCOTT, Cal.

"Yours is the most interesting and instructive catalog I have ever received. Please keep my name on your list.

MRS. C. S. GREENWADE, Ariz.

Argenteuil An excellent variety for the canner and early shipper. This variety is now more extensively grown by large planters and shippers because it is more prolific and stands shipping better. Also its purple tinge is attractive, and its excellent flavor puts it on an equal with the Palmetto for table use.

(Pkt. 10c), (oz. 20c), (¼ lb. 50c), (lb. \$1.50 postpaid).

Palmetto A popular variety for the home garden or for shipping. The sprouts are green and of delicious flavor. (Pkt. 10c), (oz. 20c) (¼ lb. 45c) (lb. \$1.25 postpaid).

Asparagus Knife—Price 90c; by mail \$1.00.

Asparagus Moss

We always have on hand a large supply of moss for asparagus shippers. Price on application.

Tapes

FOR TIEING ASPARAGUS

Spools of 1000 yards, red, white or blue. \$6.75 per Spool, postpaid.

Prevent Rust

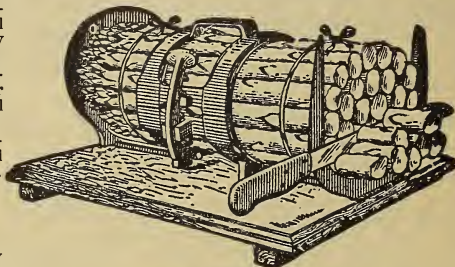
About November 1st cut and remove all top growth and spray the Asparagus bed with Sulphur, using the Anchor Brand.

SUCCESSFUL SEEDSMEN

Successful seedsmen must first of all know their business. Must be honest so that their house will have a reputation for reliability. They must be educators so that their customers can buy intelligently.

Seedsmen must be philanthropists because they not infrequently have opportunities to do the public a great service without reward.

"We derived great benefit from the catalog and literature you so kindly sent last year. We want to thank you for this year's catalog, which is invaluable to the gardener, there is so much genuine good information in it. "WALTER A. KINNEY, Calif."



Asparagus Buncher

Mary Washington Asparagus

Asparagus Buncher

We carry the Philadelphia make, which is the popular one with all large shippers. No. 1 size will shape bunches 3-3½ inches in diameter, weighing about one pound. No. 2 will shape bunches 4-5 inches in diameter, weighing about two pounds. Price—(No. 1, \$2.75), (No. 2, \$3.00) f. o. b. here.

Whether your patch is small or large, it will pay you to get an Asparagus Buncher, either one or two pound. All professional shippers put it up that way because it saves the retailer the trouble of weighing and the constant loss of overweight to each pound; besides, this work may be done at home and not at the busy market.

"Being new comers we have much to learn and are finding your seed catalog a wonderful help.

HENRY MEIGGS WALTER, Cal.

"I wish to thank you very much for sending me your splendid catalog. It is so full of interest and help.

MRS. C. L. JESSUP, Texas.

"Your place is the only one where I am certain of pure seed.

"H. S. EDWARDS, Calif."

"I borrowed your catalog from a neighbor. It contained such perfect directions I am sure it is the most valuable catalog for the beginner now in publication.

MRS. HALLIE SHEARIN.

A & M Beans

All 10 lb. Lots of Beans \$3.00 Postpaid. Write for Quantity Price.

Read

All orders for large quantities that would be cheaper to send by express or freight, we deliver to the transportation company at Los Angeles. We do not prepay transportation unless sufficient money has been sent for that purpose.

Market gardeners who are beginners and not familiar with gardening in the Southwest would do well to consult us either in person or by mail before buying, as to variety and time of planting. Special attention should be given to the instructions concerning the time of planting, which is an important factor in Southern California, as each month requires a different variety according to the market for which they are grown.



All Peas and Beans are Hand-Picked

All Beans and Peas are hand-picked. This gives the grower more and better seed per pound. When buying get the best.

The hand picking of seed beans is a task of large proportion and it may surprise you to know that we have employed almost throughout the entire year, six or more persons constantly hand-picking beans and peas.

Bean Culture for Home Gardens

During the early spring give sandy soil preference, but heavy soil in summer. When the ground is properly moistened and pulverized, plant bush beans one or two seeds every four inches, in rows twenty to twenty-four inches apart. If the soil is heavy, one-half inch is deep enough. Plant deeper in sandy soil. During the cool spring months plant shallow; during the hot summer months plant down to moist earth, if it should require five inches. Do not plant in muddy soil, nor irrigate immediately after planting, else the seed will rot. During the winter months do all irrigating in the morning, because the water from the pipe is warm and will help the growth. When applied in the evening the water chills the plants, cools the soil, retards the growth and causes mildew. During hot summer days irrigate in the late afternoon. Never sprinkle beans.

Mulch the soil as soon as it gets dry after each irrigation. All beans should be sprayed with powdered sulphur of the best grade twice during the season—once before the blossom appears and again just before the green bean is ready to pick. Apply the Anchor brand of sulphur in the morning of a bright sunny day before the wind rises, and before the dew has dried. It is not necessary to cover the foliage with sulphur thick enough to injure it, but if sulphur is scattered along the row so that the dust will pass lightly over the field, the fumes created by the heat of the sun will prevent mildew.

Sulphur will not cure, but will arrest and prevent mildew. Market gardeners should read carefully the description of each variety.

Anyone having light, sandy soil that needs enriching, should plant it to beans, inoculating the seed with nitrogen culture.

The following list comprises all the varieties best suited to general gardening. We have ceased to catalog others that would only mislead the gardener.

Write for quantity prices on all beans.

FLAT YELLOW POD VARIETIES

Ventura Wonder Wax Nearly all agree that this is a wonder indeed. Long flat pod, very prolific; bears early, and continues nearly all summer; planted in September, if not too cold, bears until January, being rust proof. This bean was introduced by us in 1900, and has been the market gardener's favorite since that time. Plant from February to October. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Write for quantity price, as prices fluctuate.

Rust Proof

"In a field of Ventura Wonder, were some Navys mixed here and there. The Navys were destroyed with rust but the Venturas were unaffected."

Mrs. H. L. Ross, Seattle, Wash., writes as follows:

"Have now raised Ventura Wonder Beans in California, Hawaii and Washington, and find them equally prolific in all three places. Had six crops from same vines last season, one planting being all that was needed all summer."

A & M Golden Wax Long, flat pod, rich golden yellow, stringless. This variety is so superior to other strains of Golden Wax that we have discarded all but this. Plant early in April and until August. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Davis Kidney Wax Good bearer; pods are long, rustless and hardy; very tender when young. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

This is the best Garden Bean for the interior, Imperial Valley, Arizona and New Mexico, because the blossoms will not fall even at a temperature of 110 degrees, when most other varieties fail, the Davis will yield a big crop. It is an excellent dry bean.

FLAT GREEN POD VARIETIES

Canadian Wonder Flat pod of good flavor, not stringless, but otherwise tender. Very hardy. Desired above all others by gardeners growing on the foothills for winter shipping, because of its luxuriant growth and continuous bearing of long, straight pods. Plant in September, October, November, December and January, according to your locality. (Per pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Horticultural Desirable for green, shell and dried beans. Stringless and of excellent flavor. It is of Italian origin and is very popular with the Italian population. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Six Weeks A strong, rapid grower, which matures quickly. Flat pod. Only desirable for forcing. Plant in February and March, also early in September and October. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

French Mohawk Long oval pod, very tender and prolific. Matures in six weeks. Desirable for a profitable short crop, as only two months is required from seed time to the end of the crop. Plant every month from March to October. (Per pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

ROUND YELLOW POD VARIETIES

Refugee Wax This is a favorite because of its hardy growth and enormous yield of tender, round stringless pods of excellent flavor. Plant from April until September. (Per Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Prolific Black Wax Pod round straight, five to six inches long. Decidedly the most desirable for mid-summer gardening. Plant from April to August. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

ADVICE

Watch for the slightest indication of mildew. When it appears spray with the Anchor Brand of Sulphur. This will not only arrest any further advance of mildew, but it will fertilize the soil and destroy any germs of Fungi that may be there. For application use the American duster.

GROWING GREEN OR WAX BEANS FOR THE CANNERY

It is a good side-crop to grow in a young orchard to make quick returns, because your crop is off and the ground available for another crop within ten weeks, besides it enriches the soil.

BUSH BEANS—Continued



Stringless Greenpod

ROUND GREEN POD VARIETIES

Stringless Green Pod One of the best varieties for the first early spring planting. It is very prolific and tender, a great favorite with market gardeners, for a quick maturing crop. Plant from April 1st until Aug. 1st. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Early Refugee or 1000 to 1 An all around favorite for the summer months. Round pod, medium size, tender, desirable for table and cannery. It is a favorite with the market gardener because it is a good shipper, a good seller, and very prolific. Plant from April to August. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Longfellow or French Stringless Attractive, long green pods of excellent quality. This perfectly round, green podded bean is tender and prolific, and is one of the best varieties for the home garden. The pods are of fine quality, nearly stringless and exceedingly handsome. In production, very prolific, exhibits a profusion of highly beautiful, rich green pods, 7 to 8 inches long, straight and round. When cooked the flavor is decidedly delicious. The plant grows 14 to 16 inches high, bearing edible pods in 35 days. Plant April 1st until Sept. 1st. (Pkt. 10c) (½ lb. 20) (lb. 35c) (10 lbs. 3.00) prepaid.

Red Valentine A very popular stringless, round, green-podded bean with excellent flavor. The bean is blotched with red and is very good as a dry bean. It is an early variety and very prolific. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

ADVICE

Watch for the slightest indication of mildew. When it appears, spray with the Anchor Brand of Sulphur. This will not only arrest any further advance of mildew, but it will fertilize the soil and destroy any germs of Fungi that may be there. It will also eradicate Nematode. For application use the American duster.

"Don't forget me for the 1922 catalog. I would not trade it for any book on the care of vegetables. Thank you."

HENRY RAMIERES.

"My garden has always been a worry until I began to get your seeds and now it is a pleasure when the seeds grow and produce something worth while."

MRS. M. H. OVERDECK, Napa, Calif.

"When I am asked where I get my seed I have one answer: 'A. & M.' Your seed justifies the answer."

MR. G. A. UNGER, Dinuba, Calif.

"Find inclosed a small seed order and oblige me by sending your catalog each year. I just received a copy from a friend the other day, and I like it very much. I have tried to raise gardens for forty-five years and hope to have better success in the future with your good advice and help."

MRS. N. A. McFERRON, Cal.

POLE BEANS

A Word About Pole Beans Many growers hesitate to plant pole beans because of the scarcity of poles. This objection is easily overcome, and the greater profit in growing the pole varieties should be sufficient reason for going to a little extra care.



A Good Way to Train All Pole Beans

Superior Kentucky Wonder

We have been growing this bean on our trial grounds for two years, and are now convinced it is superior to any of the other Kentucky Wonder types offered by us for the home garden.

The large size pods fill perfectly and in the "snap" stage are deep green color, meaty, stringless and of a delicious flavor. Vines continue to bear immense quantities throughout the season if kept picked closely. When allowed to ripen the shell beans of pure white color are most excellent for winter use. It is a pole snap bean that no home garden should be without. It's the one pole bean for any garden, and you will never regret planting it. It will prove a prize winner in any contest. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

MR. POSTELL, California.

I got some "Superior Kentucky Beans," will say in advance that no bean can compare with them. I planted the beans and after using all the green beans we could I got 4 lbs. dry beans from 3 hills. In July I planted the seed I had grown and just six weeks to the day the dead vines were pulled out. I will leave this open for some contest. I got two crops from the Monstrous Lima bean and nearly all perfect seeds average 1½ inches long, but the foliage got so dense I cut them out.

Kentucky Wonder The Kentucky Wonder was for many years the most popular bean with market gardeners as well as for the home gardeners. Its long round stringless pods are very prolific and tender. Its only drawback was the fact that it is much more susceptible to mildew than other varieties. For April and May planting it cannot be excelled. It has brown seed of little value as dry beans. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

MRS. NEILSON, Burbank.

I purchased of you fifteen cents worth of Kentucky Wonder Beans and planted 4 rows 60 feet long. I gathered 350 pounds of green beans. They were trellised with 4 ft. lath.

White Seeded Kentucky Wonder

This popular Bean was first introduced by us in 1909. Because of its resemblance to the well-known Kentucky Wonder but having white seed, we named it the White Seeded Kentucky Wonder. It proved to be all that we had claimed for it, so that it is now the most popular green Bean on the market. It is preferred by the shippers because of its solid pods, and by the canners for the same reason. The grower prefers it because it is a good seller and a money-maker.

This variety of the many pole beans may truly be termed the All-Round Money-Maker. It is as hardy and rust resistant as the Canadian Wonder. In the South where earliness and lateness mean so much to the market gardener, the White Seeded Kentucky Wonder is far ahead of other varieties. It is enormously prolific of firm pods that withstand shipping to almost any part of the United States. It matures ten days earlier than the Brown Seeded Kentucky Wonder.

This variety is now being offered as a rust-proof pole bean. It is more rust-resistant than other varieties.

The seed is pure white, and on that account is a profitable commercial bean. It is the best bean for the gardener, the shipper and canner. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Kentucky Wonder Wax The Pride of the Garden. Its popularity as a home garden bean soon reached nationwide proportions, and today is offered by nearly every seedsman in the United States. It commences to bear when scarcely higher than the average bush variety, and keeps on producing until killed by a frost. It is a rampant grower, one plant filling a pole with a mass of vines densely loaded with luscious beans. They are firm, entirely stringless, and when cooked, deliciously rich and buttery. The seed is brown, closely resembling that of the Kentucky Wonder. Plant from April to August. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

POLE BEANS—Continued

Lazy Wife One of the best pole beans for snaps. The large, fleshy pods are five to six inches long and entirely stringless when young, have a rich buttery flavor. When nearly matured they are delicious when shelled and cooked while yet green. The dry beans, too, are unsurpassed by any. The seed is white, nearly round, and somewhat bigger than a pea. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Horticultural Pole Also referred to as Romaine, Cranberry, Italian and Cornfield. Its large succulent tender pods make it a desirable bean for the table. It is also one of the most desirable green shelled beans for succotash and excellent as a dry bean. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

White Creaseback This variety is especially valuable for its extreme earliness, and its habit of perfecting all its pods at the same time. Vines small but vigorous, and, in good soil, wonderfully productive, bearing pods in clusters from four to twelve. Pods medium length, silvery green, of the best quality as snaps and stand shipping better than most sorts. The seed is small, oval, very white and hard. It is an excellent bean to cook dry or to sell on the open market as the small white bean. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Celestial or Yard Long

A good table bean as well as a curiosity. It is very prolific and a rank grower. Should have ample arbor to climb upon. It should be grown more extensively in the home garden. It is of Chinese origin and one of the best vegetables emanating from that source. It is also absolutely rust-proof. (Pkt. 10c) (1 oz. 20c) (1 lb. \$1.50) postpaid.

The Scarlet Runner An old-time favorite that heretofore has been planted chiefly for ornamental purposes. But few people know that the Scarlet Runner may be planted May 1st and in six weeks attain a height of eight feet, and rapidly cover an arbor with vines twenty feet long.

The Scarlet Runner planted May 1st will bear edible pods from July 1st until late fall. When the vines mildew trim them back to within a foot of the ground. The roots will survive the winter, and by the following May will have the arbor again covered and bear green beans until August, when the vines again mildew. Cut back as before and with proper irrigation they will bear another crop in October, and so on, two crops a year indefinitely.

Be sure to build a permanent arbor, and plant some Scarlet Runner during April. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Pole Lima Beans

In California the 1920 Crop of Beans was 180,000 Acres, Valued at \$19,500,000.

Pole Lima Pole varieties of Limas are far more profitable to grow than the bush varieties; what they lack in earliness they make up in continuous bearing. They should be planted from April 1st until September 1st.

King of the Garden Very prolific; large and desirable for the market gardener. (Per pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Early Leviathan We recommend this variety to be planted where it may have a trellis to climb upon. It is the ideal lima for the home garden. It is very productive. The pods grow in clusters. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Monstrous Lima

There is nothing more profitable in a city garden than a dozen stalks of this wonderful bean. It is a common occurrence for our city customers to tell us of its great productiveness and excellent flavor.

The grower picked one and one-half barley sacks of green beans from one vine at one picking.

Two crops a year for many years. Originated in Orange County, Cal. Introduced by us in 1907. This picture shows actual field growth of the bean.

In addition to this we have numerous testimonials to the effect that we have not exaggerated when we claim this to be the largest, most prolific, most profitable and best flavored Lima bean now in existence. Like every other vegetable, it must have proper culture. Plant 6 feet by 6 feet, leaving one stalk in each hill. If convenient, plant in a sheltered place about April 1st. You will then be gathering beans during September and possibly until January. After a while new growth will appear, then prune as you would a grape vine, and by May 1st you have a new crop as profitable as peppers or string beans or any other early vegetable. During July the vines will show age and become mildewed; prune as before and in October you will begin gathering your third crop. Continue pruning twice a year; irrigate and fertilize. (Pkt. 15c) (½ lb. 35c) (lb. 60c prepaid) (10 lbs. \$5.50 prepaid).

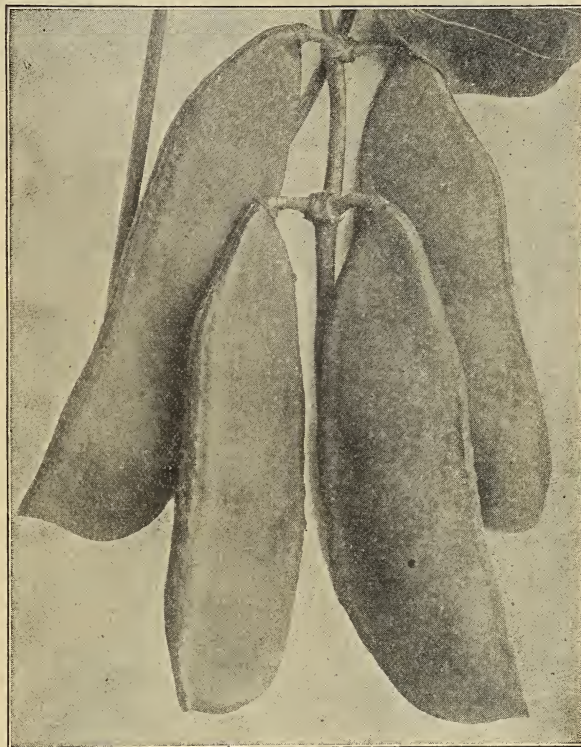
Bush Lima Beans

SPECIAL FOR MARKET GARDENERS

The Bush Lima cannot be recommended too highly. The beans can be grown and gathered much more easily than the pole limas as the vines require no support. They can also be grown closer together. Dwarf limas are fully equal in quality to pole limas and as a rule are earlier maturing.

Limas require a longer season for maturing than other garden beans. Do not plant till the ground is warm and danger of frost is over. If possible select rich, light soil. Plant in rows two to three feet apart, dropping the beans three to four inches apart and covering 1½ to 2 inches deep. Hoe often, but only when the leaves are dry.

Fordhook is the Gardener's Favorite



A & M Fordhook

Fordhook Bush Lima In order to get the best results, plant one foot apart in rows 3½ feet apart. It is an improvement over the well known bush Lima because it is more prolific. It is a strong grower, more resistant to blight, and is more profitable to grow for the market because the pods remain green. This is of great advantage to the peddler, retailer and shipper. It has received universal praise. We recommend it to our customers for both home and market gardens—for the home garden because of its excellent flavor and productiveness; for the market gardener because it is demanded by the shipper and consumer. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Improved Bush Lima This bean differs from the old bush variety in being ten days earlier. Will yield one-fourth more tonnage per acre. The pods contain four to five beans that are larger and thicker than the old bush lima. Where the Improved Bush Lima is known the old variety is no longer in demand. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

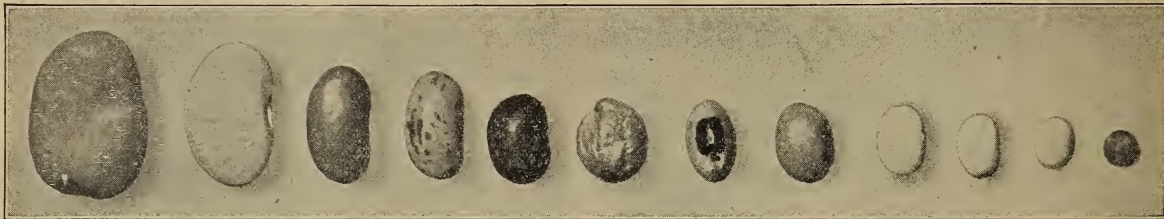
Henderson's Bush Small white Lima Bean, of excellent flavor and enormously prolific. It is grown so extensively here that it ranks commercially with common limas and other commercial varieties. It is used largely for canning. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Ask for quantity price.

Burpee's Bush Lima This bean has become very popular in all irrigation districts because it is earlier and more easily grown. There are no vines in the way when irrigating and cultivating. It is enormously prolific and keeps bearing a long time. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Write for quantity price.

Commercial Beans

Bean Culture Address: College of Agriculture, University of California, Berkeley, California. Ask for Bulletin No. 294. entitled, "Bean Culture in California." It is thoroughly Californian and complete in every detail from preparation of the soil, planting, cultivating, harvesting and marketing.

If you are interested even in a small way it will prove both interesting and valuable. Also write United States Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 907. It contains some practical illustrations. They will be sent free.



Reading from left to right:—Broad Windsor, Lewis Lima, Red Kidney, Pinto, Pink, Garvanza, Blackeye, Mexican Red, Lady Washington, Navy, Tepary, Lentil.

Be sure to consult us when in the market for these varieties.

If only one pound is desired, send 25c to cover packing and postage. For larger quantities, ask for the prevailing prices.

Ask for price at the time of purchase. Because of the close margin at which this seed is sold, no price can be set in advance of the daily market. We have the best cleaning facilities on the Coast. All our seed is re-cleaned and even hand-picked when machinery fails.

All commercial beans should be planted in large acreage. It is easier at any time to dispose of a carload than less, and more profitable to the out-of-the-way grower who must always pay the freight to some central warehouse. It is advisable for the small rancher when contemplating the planting of beans to agree with his neighbors to jointly plant not less than eighty acres, as it requires 80,000 pounds to make up a carload for Eastern shipment.

It often requires fifty cents per hundred pounds to ship small quantities to a warehouse, whereas a carload would be shipped direct from your nearest siding at no cost to you, thereby saving to you and your neighbors four hundred dollars on each carload.

Tepary An ideal bean to grow in arid places where no other variety will mature. It will produce from 1000 to 2000 pounds of dry beans without irrigation. It is very desirable to plant in midsummer for a quick growing crop for green manuring; its use is now almost confined to this purpose because of its rapid growth and it is rich in nitrogen.

Lentil A small lens-shaped pea having a flavor peculiar to itself that is liked very much by many people. It is sold at all grocery stores where it commands a fair price. The vine resembles that of the vetch and it should be cultivated in about the same way and in the same season.

Garvanza—(Chick Pea) This is very popular farther south where it grows to perfection and where the demand for it is greater. However it is sold at all grocery stores and deserves to be in more general use. It grows readily here, the bush is quite ornamental and bears abundantly. A row in the home garden could serve as a very useful hedge or border, or a large grower might well plant 100 acres and realize a satisfactory profit.

Pink An old time favorite because it is very prolific, has a good flavor and is one of the best sellers. It is safe to say that no grocery store in the country is without the Pink bean. It is always listed in the market quotations.

Red Kidney Like the Pink and Navy beans it is sold everywhere and commands a higher price because of its better flavor. It is grown largely for canning. It is easy to grow, easy to thresh and does not pop in the field. The long straight pods bear six to eight beans. This bean is also harder than the other varieties, on that account is often planted late for green beans, the pods of which are tender when grown during the winter months.

Mexican Red The Mexicans do know beans, and this is their favorite. When tourists return from Mexico they at once ask our grocers for this Red bean. Americans who have lived in Mexico for a time are not content without this bean. There is a ready market for it at our wholesale grocers, who supply the great southwest territory with groceries. Plant some for your own use.

The Lewis Lima This common lima is grown so largely in acreage of all the other varieties combined. There are many strains of the common limas, but the Lewis is conceded to be the best. Our seed is all carefully rogued in the field and hand-picked under our supervision at our warehouse. You will find no splits nor rattlers in our seed. It is a short-sighted policy to buy cheap seed from grocers.

Lady Washington and Navy These two varieties go hand in hand. Both are small white beans, but the Navy is slightly smaller and is often distinguished by being called the Small White, while the Lady Washington is called the Large White, yet the largest is a scant half-inch long, while the Navy is scarcely more than one-fourth inch long. The Navy is more rust resistant.

The Blackeye This bean is always profitable to the grower because it yields 1500 to 2500 pounds per acre without irrigation, and on almost any kind of soil. It is a good cover crop and soil renovator. The beans find ready market at a fair price. Rabbits will not eat the Blackeye.

The Blackeye is in a class by itself, and the price is not governed by the market for other beans. Indeed the price has proven to be the reverse. When commercial beans are low the Blackeye commands a higher price. It is safe to plant Blackeyes because you always get a crop, and you never fail to sell at a fair price.

If your soil needs humus, plant Blackeye.

Soy Beans—See cover crops.

Aside from growing beans commercially, the grower should consider the benefit derived from growing beans other than a good selling price. Beans fill nicely in crop rotation; whether grown for green beans or dry beans, or only for green manuring, they enrich the soil for a subsequent crop. It is a quick growing crop. For green manuring it may be plowed under within eight weeks; for green beans it is ready in ten weeks; for dry beans the crop may be harvested and marketed within four months. All this means that from April 1st until September 1st it is safe to plant beans, according to the purpose for which you are growing them. For an early crop of green beans, plant Stringless Green Pod; your ground is ready for the next crop within ten weeks. If you would grow commercial beans plant the variety best suited to your soil conditions. If for green manuring the Whip-poor-will seems best where moisture and growing conditions are favorable; the Tepary where these conditions are unfavorable.

Broad Windsor This variety is often called the tree bean because it differs from all other varieties in the nature of growth. It is not a vine or bush but one up-right stalk bearing pods at the axil of each leaf, continuously maturing from bottom to top throughout its period of growth. It is used largely as a green shelled bean. The best time to plant it is in September, because it thrives best in cool weather. It endures frost. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

It is one of the best nitrogen gathering legumes, and on this account every garden should have a plot of these beans.

We are indebted to Mr. John House for the suggestion that when grown in the home garden, the tops should be pinched off. The beans will become more fully developed.

Dear Sirs:

I note in your catalog that you say the Broad Windsor Bean will stand atmosphere of twenty-eight degrees; a statement, far short of their real hardiness. We have just had three weeks of the coldest weather known here since 1913—twenty degrees or worse. The last week, everything was covered with snow. The beans came out unharmed. With me the beans form large bushes, anywhere from three to a dozen or more shoots, sometimes six feet tall and very prolific.

MAN S. DAVIS.

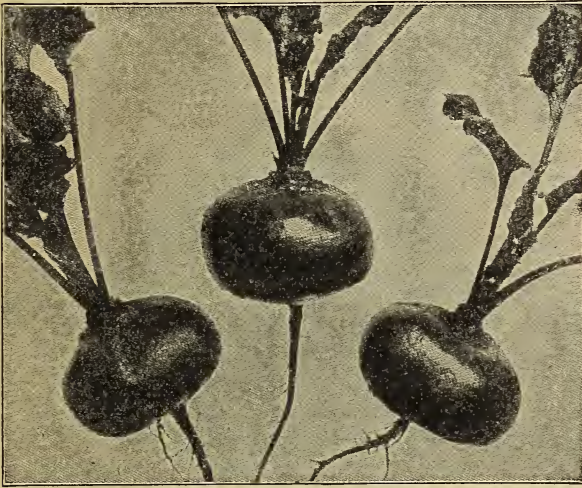
Notice! Bean Growers!

An application of two or three sacks of Toro Sulphur per acre will greatly reduce your losses from mildew and nematode, and will greatly increase your yield. Give it a fair trial.

A & M Table Beets

MARKET:—Besides the everyday demand at the local market places, there is the seasonable demand from outside points and for this purpose planting should range from August 1st until January 1st. See the shipper for further information. The canneries too use a large acreage. If you are conveniently located you will be fortunate to secure a contract with one of them.

Culture Beets may be planted all the year round where the temperature does not linger below 30 degrees. Sow the seed one inch deep in well prepared, moist soil in rows eight or ten inches apart, or on ridges same as lettuce. Drill eight pounds of seed per acre. Thin out to one plant every three inches, and transplant the discarded plants in any convenient spot about the garden. The Egyptian is a small, dark red, flat, smooth variety. It is sweetest and best for the table. Irrigate about every two weeks, unless the nature of the soil is such that more frequent irrigation is found to be necessary. Mulch the soil after each irrigation. Beets are ready for use in ten weeks and continue in prime condition for another ten weeks. One ounce of seed for 100 feet of row.



Early Flat Egyptian

Early Flat Egyptian The market gardener's winter favorite on account of its beautiful appearance, earliness, and excellent flavor. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (½ lb. 65c) (lb. \$1.25) postpaid.

Early Blood Turnip Of large growth. Flesh very red color when cooked. On account of its tall leaves it is a favorite summer time beet with market gardeners. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (½ lb. 65c) (lb. \$1.25 postpaid.)

Crimson Globe This splendid variety has now been grown quite extensively in many sections of the country and the many good reports received from old customers indicate that it gives most thorough satisfaction. It is of medium size, generally about three inches in diameter, very handsome in shape, with a remarkably smooth surface. It has a very small tap-root. Gardeners prefer it for summer planting because the large foliage protects the beet. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (½ lb. 65c) (lb. \$1.25) postpaid.

Early Crosby A long time favorite for the family garden. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (½ lb. 65c) (lb. \$1.25) postpaid.

Detroit Dark Red This is an ideal beet for all purposes. It cannot be excelled for the table; free from all fibre and very sweet. It is the best of all for pickling or canning. Even the tops are good when pickled. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (½ lb. 65c) (lb. \$1.25) postpaid.

When beet tops are young and tender they may be cooked as spinach and are as good. The stems may be par-boiled and pickled for immediate use.

THE DUTIES OF SEEDSMEN

The seedsmen's duties do not end with the buying and selling of seeds; he must educate the customer. Probably more than 75% of the errors and disappointments are because of the lack of knowledge on the part of the buyer.

Therefore it is the seedsmen's duty to safeguard the customers against such error by advising them to plant the right seed at the right time under right conditions.

A & M Stock Beets

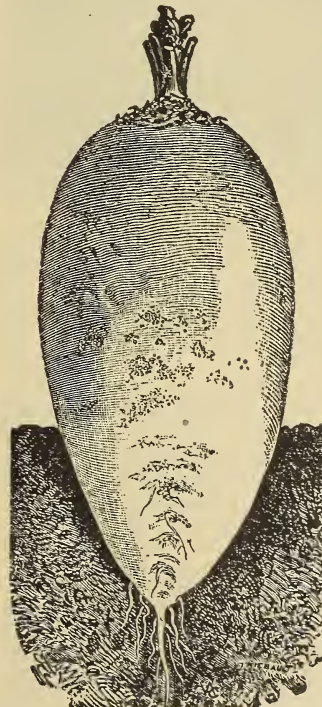
Since the coming of the silo, the planting of beets for stock has fallen down until now only a very small acreage is planted. The silo provides the succulent food necessary to feed with dry forage. The growing of corn for the silo is much more economical, but to the breeder of hogs, small stock and poultry, we recommend the planting of beets. The Stock Beet is one of the finest fat and milk-producing crops we have today, and when fed in conjunction with grain they are worth nearly as much, pound for pound, as the grain itself.

If larger quantities are desired, do not fail to write for special prices, as all field seeds are subject to market fluctuations.

Culture—May be sown all the year round in drills sixteen inches apart. Thin out to stand six inches apart in rows. Keep well cultivated; 8 pounds of mangel, or 10 pounds of sugar beet seed will plant an acre and yield 20 tons or more of beets.

Half Sugar Rose

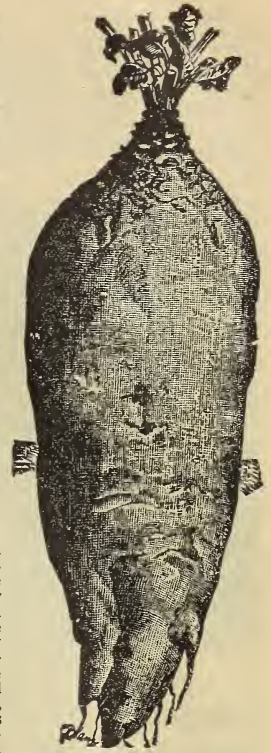
A distinct type of Sugar Beet, producing not only a good crop, but roots of giant size and richest food quality. It has yielded 55 tons per acre, several tons per acre more than the heaviest producers of other sorts on the list. They have a small top, and are easily trimmed. The roots are heavy, but are so easily harvested that they may be uprooted by a push of the foot. The flesh is white, solid, tender and very sweet and imparts a rich, pleasant flavor to dairy products when fed to milch cows. Also particularly good for fattening hogs. Half Sugar Rose is a profitable Stock Beet to grow. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00 postpaid).



Half Sugar Rose

it the popular beet of that country. We are always on the lookout for something better to offer our trade. We are sure you will add dollars to your dairy by planting the Sludstrup. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00 postpaid).

The Nematode thrives in beet fields, causing much loss to the grower. Toro Sulphur promises relief. Try it.



Long Red

Long Red Mangel

The largest Stock Beet. Yields 40 to 50 tons to the acre. Will grow in land containing more alkali than any other beet. All stock except horses eat it readily. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00) postpaid.

Golden Tankard Mangel

Contains more sugar and less water than any other Mangel. Rich in milk-producing qualities, hence a favorite with dairymen. Horses will eat it (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00 postpaid).

Klein Wanzleben

(Sugar Beet). This variety is without question the best in cultivation. Not the largest in size, but the richest in saccharine. It will fatten hogs as quickly as grain. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00 postpaid).

Sludstrup

This variety is more extensively grown in Holland by dairymen than any other. Its uniform growth of large, well-shaped beets rich in saccharine. Its record for producing rich milk and sweet butter, has made

A & M SWISS CHARD

Culture—Same as for beets; transplant 12 inches apart in rows 18 inches apart.

Grown for its leaves only; one of the best early greens. Cook the leaves as you do spinach and the stems in cream as asparagus. Leaves grow to enormous size, 20 inches to 2 feet in length. The plant is almost perpetual if kept trimmed, but it is better to have a new crop every year. The tender leaves make it a desirable plant for poultry greens; much more desirable than alfalfa, because it can be grown with less care and in any convenient place about the premises. Try it for your hens.



White Swiss Chard

Lucullus (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00 postpaid).

White Swiss (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75 postpaid.)



Brussels Sprouts

BRUSSELS SPROUTS

Culture—Same as Cabbage.

Market:—The demand for Brussels Sprouts is probably in excess of the supply, but the cost of production is so high that it must be classed as a luxury. We recommend it highly for the home garden.

One oz. of seed will produce about 5,000 plants.

For Aphis Spray with "Black Leaf 40."

This excellent vegetable, considered the most delicious of all the cabbage family, is finding increased demand in the public markets, and should be grown more largely. It is a long season grower and ranks as to time with our late varieties of cauliflower. Therefore, seed should be planted for succession from July 1st until Nov. 1st.

The increasing demand has spurred us on to look for something better than has hitherto been offered on this market. We have succeeded in securing a medium dwarf variety that bears larger heads, and every joint a head. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00 postpaid).

BROCCOLI

A Hardy Strain of Cauliflower

The acreage planted to Broccoli is being enlarged each year; growers find that it endures lower temperatures and more adverse conditions than Cauliflower. It is slow to mature, therefore the seed should be planted during July for an April harvest.

The fact that many growers are securing a satisfactory profit should encourage the planting of large acreage.

St. Valentine Crop failure.

Purple Cape (Pkt. 10c) (oz. 85c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

Snowy White (Pkt. 10c) (oz. 85c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

A & M CHINESE CABBAGE



Chinese Cabbage

Culture—Grow it as you do lettuce; transplant 10 inches apart in rows 12 inches apart. Plant from Sept. 1 until Feb. 1.

Boiled with beef or pork it is excellent, having a much more pleasing flavor than cabbage. The inner leaves make better cold slaw. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (½ lb. \$2.50) (lb. \$5.00 postpaid).

Our seed is imported. It is the genuine article as pictured here and cannot be compared with the Pe-Tsai seed grown in Europe.

"Tried out some of your seed last spring first time we ever had any luck with Chinese Cabbage seed."

SCHMIDT & WALTHER, Jefferson City, Mo.

Agriculture is a Science

The successful grower of the "Great Southwest" is an expert in his line. He has all the United States for a market during the winter months, and all the arid Southwest in the summer time. He must consider well his soil, be an expert in the selection and use of fertilizers, in the selection of his seed suited to his soil, to his climate, to the time of planting and the market for which he intends to grow. He must know to perfection when to irrigate, to cultivate, and when not to do so. He must study insecticides, know what, when and how to apply them. He must not only keep posted as to market conditions and prices, but must figure ahead on these conditions.

When giving consideration to approximate yields and values, take into account the cost of labor, irrigation, time to fertilize, and expense of marketing. All these figure in determining the net profit. Then consider too the adaptability of each crop to your soil and the purpose for which the crop is intended. All must be considered when deciding the advisability of planting field crops.

When in doubt buy Aggeler & Musser's seeds, and always consult AGGELER & MUSSER SEED CO. on all the above subjects. And keep this catalog.

Notice in this picture the method of planting two rows on a ridge. It is now generally practiced by the large gardeners, and should be applied in the home garden. The drainage this method affords produces cleaner, better and earlier vegetables.



The proper way to grow vegetables where irrigation is necessary

The following is a list of vegetables that should be planted the way we have illustrated in the picture:

Beets	Carrot	Lettuce	Parsley	Radish	Spinach
Chard	Kohl Rabi	Onion	Parsnip	Salsify	Turnip

A & M Cabbage

Write University of California, College of Agriculture, Berkeley, Cal., for Circular No. 130, entitled "Cabbage Growing in California," by Stanley S. Rogers.

Cabbage may be grown all the year in Southern California and throughout the Southwest.

It should be borne in mind that the big planting of cabbage is intended to meet the Eastern demand in midwinter and early spring, and that our time of planting is out of the natural season, and therefore often subjected to unseasonable weather, which causes it to be stunted and often shoot to seed. The wonder is that any of it matures.

Improper culture, too, will stunt the normal growth of cabbage and cause the heads to prematurely go to seed.

Cabbage requires heavy soil but good drainage and frequent but shallow cultivation.

Culture—The secret of growing hardy plants is to thoroughly prepare the soil in the plant bed. Plow the soil to a depth of eight or ten inches, pulverize well. Sow in drills not too freely, about one-half inch deep, press the soil firmly over the seed; this is important. In about six weeks transplant in rows three feet apart, one foot in the row for Winnigstadt, eighteen inches for large-heading varieties. Keep the crop well watered and cultivated for when the growth is checked the seed head matures and bursts forth as soon as moisture is again applied. This accounts for much cabbage going to seed. Early varieties mature about three and one-

half months after transplanting, late varieties in about five months.

Should there be a cold spell when the thermometer lingers below 25 degrees, just at the time the cabbage begins to head, you may expect twenty-five per cent of your crop to shoot to seed.

One large and constant grower says: "November transplanting escapes the hard winter season that causes so much loss by shooting to flower."

For Cabbagae Worms—We do not hesitate to recommend Paris Green to be used up to two weeks before marketing the cabbage because the spray only reaches the outer leaves that are not eaten, and because within two weeks the elements neutralize the poison. Also when only one tablespoonful of Paris Green is mixed with four gallons of water and kept well agitated there could not possibly be poison enough on a head of cabbage to even make any one sick. Add 1 cupful of flour paste to make it adhere.

For Aphids—Apply Nico Dust or spray with Black Leaf 40. Direction: One tablespoonful to two gallons of water. Add about one-eighth pound of soap. Add one teaspoonful Paris Green to destroy the worm also.

Marketing—The every day demand at the local market should be met with the most palatable varieties like the A & M Early Drumhead, Copenhagen Market and Glory of Enkhuizen.

A & M Scott's Cross

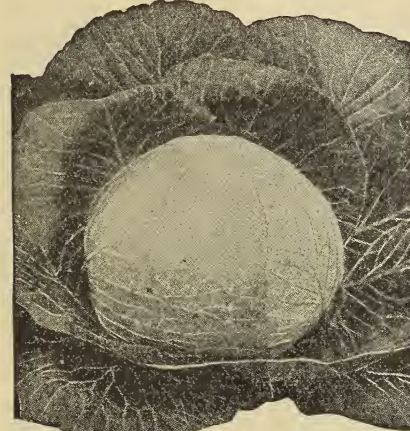


Scott's Cross

The introduction of this cabbage into the Southwest means millions of dollars to the growers. An ordinary average yield of Winnigstadt per acre is eight to ten tons. Scott's Cross will average twelve to fourteen tons of a better grade. This means about fifty dollars per acre more at no greater expense. Scott's Cross is one of the best to grow for shipping. It is a cross between the Winnigstadt and the Flat Dutch. It promises to outrank the Winnigstadt, but up to the present time there has been some variation as to its type and uneven maturing, but it is such an excellent cabbage because of its hardness that we have contracted with our seed grower to make a perfect type by selection. This has now been accomplished. We wish all cabbage growers to give it a trial this spring, that you may not hesitate to plant it next fall. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

Early Jersey Wakefield Very early, maturing in 90 days. Small head inclined to point like the Winnigstadt. Recommended for home garden where earliness is desired. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Copenhagen Market



Copenhagen Market

(Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00)

Our European grower has given great praise to this variety. It is earlier, larger and better than the Winnigstadt for the local market. It is grown more extensively for the markets of Northern Europe than any other variety. It excels because of its extreme tenderness and delicious flavor, which is compared with cauliflower. We give it urgent recommendation to growers for the home market and for home gardens.

Glory of Enkhuizen The grower when introducing this variety pronounced it the ideal for the home and for Liberty Cabbage, surpassing all others in excellence of quality and flavor. It is similar in shape and habit to the Danish Ballhead, just ideal for the local market. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Cannon Ball This has become one of the standard varieties for shipping. It is now grown as extensively as the Winnigstadt but it is planted mostly during August and September for early shipping while Winnigstadt is preferred for mid-winter crop. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Late Drumhead A large variety used extensively for making Liberty Cabbage. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Premium Late Flat Dutch A large sure header. A standard sort for late crop. Preferred for making liberty cabbage. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Drumhead Savoy The best of all Savoys. Short stump, large size, solid head. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Red Dutch Heads of deep color and remarkably solid. Excellent for slaw. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Autumn King This Giant Cabbage has astonished all who have seen it at the market. Heads weighing from forty to fifty pounds are not uncommon. It is tender and of excellent mild flavor, ideal for Liberty Cabbage, and it will yield more tons of good cabbage per acre than any other variety. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

A & M Early Drumhead Year by year this variety becomes more and more popular. It is very early, tender, crisp, and just the right size for the dealer. Truckers like it because every stalk produces a head. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Winnigstadt

No other vegetable listed in our catalog has retained its popularity so continuously and for such a long time as our strain of Winnigstadt Cabbage, introduced by us in 1896. It is now, and has been ever since that date, the most popular cabbage grown in Southern California. It is popular because it is early, solid, good flavor, sure header, and good shipper. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Winnigstadt Cabbage is worth \$1,000,000 annually.



Early Flat Dutch This is a favorite for the home garden because of its earliness and its excellence for the table. It is a sure header. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

A & M Cauliflower

2,076 Carloads of Cauliflower Were Shipped out of Southern California in 1920; All of it Was the California Pearl Variety.

A & M Pearl Cauliflower

This wonderful Cauliflower is a great favorite from California to New York, because of its excellent shipping qualities. It originated here and has made Southern California famous for her excellent cauliflower. The California Pearl is thoroughly adapted to our mild winter climate and is particularly suited for shipping because of the flower being completely enveloped within spiral curled leaves, which protect the flower from injurious exposure to rain, sunshine or frost, but particularly from injury in packing and in transit. It retains its fresh appearance longer than any other variety. It is decidedly the shipper's favorite. It is the gardener's, the dealer's and the consumer's favorite. To be packed for shipping it is only necessary to cut the stem at the base of the head, and the leaves about two inches above the head. This leaves foliage enough to cover the crown without wrapping in paper. These heads are packed two layers in a crate (16 inches deep), with the base at the top and bottom, the crowns facing the center, usually 24 heads per crate.

The small grower may plant at any time from May until February, but for profit the large grower should carefully pursue instructions given with each variety.

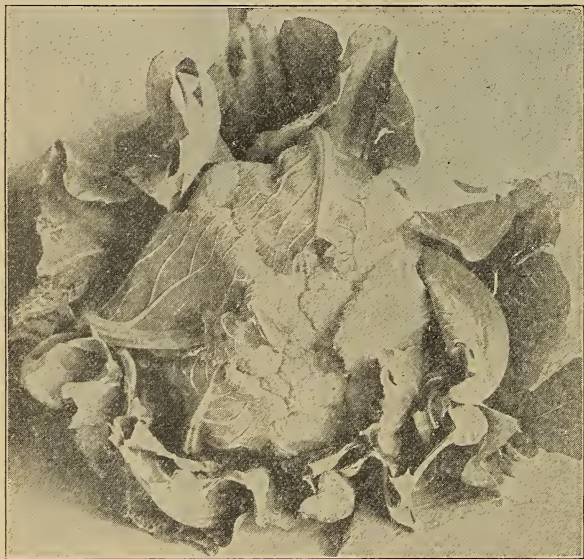
When you consider that the amount of cauliflower shipped from California each year runs into thousands of carloads, valued at \$1,000,000, and practically all of it is the California Pearl, the value of this type is of so great importance that we are proud to have been the introducers of it.

Culture—(For Shippers)—Choose soil from a rich loam to a heavy adobe. The field should be level to afford a uniform moisture. Avoid planting Cauliflower or Cabbage on a hillside.

Early varieties should be planted in the seed bed from May 1st to July 1st. Late varieties from June 1st to August 1st. Early planting of seed is advised in order that the plant may have fully developed before the proper season for maturing. Growers are constantly endeavoring to mature a normal crop out of season. Proper culture will accomplish much toward producing a good crop but too much is expected out of the normal season.

Plants should be ready to transplant from six to eight weeks. Early varieties should be ready for market in November; late varieties in December and January, and later according to the time of planting the seed.

Do not attempt to grow Cauliflower or Cabbage unless you have water in abundance.



A & M Early Pearl

Trimmed to Ship

Worth \$1,000,000 annually

A & M Late Pearl

Late Pearl Cauliflower: Attains a height of three to four feet. Culture same as for Early Pearl. This is the variety that has made California Cauliflower famous throughout the United States and is bringing annually more than \$1,000,000 to the growers. (Pkt. 10c) (¼ oz. 65c) (oz. \$2.00) (¼ lb. \$6.65) (lb. \$20.00) postpaid.



A & M Snowball

Snowball This variety is in a class by itself for earliness. The demand for seed begins in April for May planting, which is ready for the local market beginning October 1st.

There is good profit in the early variety, but care should be exercised to avoid blighting by excessively hot weather. At such times apply water abundantly, but cultivate judiciously to prevent any baking of the soil. (Pkt. 25c) (¼ oz. \$1.00) (oz. \$3.50) (¼ lb. \$10.00) (lb. \$35.00) postpaid.

Dry Weather Dry Weather Cauliflower merits the confidence of all growers as an all-year-round variety. We give it special recommendation for the first early and late planting. It requires rich soil and good cultivation, but will withstand more drought than any other variety. (Pkt. 25c) (¼ oz. \$1.00) (oz. \$3.50) (¼ lb. \$10.00) (lb. \$35.00).

A & M Pearl

The best Cauliflower known today in all Southern California, all things taken into consideration. Seed should be sown from May 25 to July 15th. Plants should be ready to set out in from six to eight weeks or as soon as they have reached the proper size and stage. Should be ready to cut by December 15th.

Shippers are very anxious to have their growers plant this variety, as it is the best carrying Cauliflower on the market. Very large, close to the ground, extra heavy foliage, and the best covered of any flower now known, which fact makes it more resistant to freezing weather. Amateurs have made good success growing this variety. We especially recommend this, as we have watched the growing of this seed, and no labor or expense has been spared by the grower to produce the best Cauliflower in the world. (Pkt. 10c) (¼ oz. 65c) (oz. \$2.00) (¼ lb. \$6.65) (lb. \$20.00) postpaid.



How Cauliflower is Planted

The furrow is irrigated several days before and immediately after planting. Note the size of the plants

"I want to say that I think every one of your seeds which I planted came up and the plants are making a better growth than from any seed I have used before. Count on me for an 'A. & M. Booster' for that reason."

FRED L. WYBURN, Rincon Copper Co., Ariz.

"I saw the flowers produced from your seed in Bermuda and they were about the most satisfactory I have ever seen."

FRANK BAILEY, Brooklyn, N. Y.

A & M Table Carrots

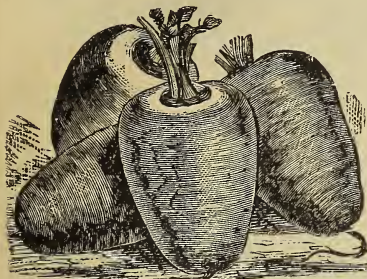
Culture—Sow one ounce of seed to 100 feet of row, four pounds per acre.

Carrots are very profitable because of the large quantity that a small patch can produce, and there is no waste, as any surplus may be fed to rabbits or other animals.

Carrots may be planted all the year round. Sow the seed from one-half to one inch deep in rich, moist, loamy soil, well prepared. Sow in rows eight inches apart, and as thin as the drill can be set to sow, or, if sown by hand, aim to have two seed to the inch, or sow in ridges same as lettuce. Plant the oxheart variety. It is the best for the table, and the most attractive for the market. The carrot has few insect enemies. Nematode is the worst. Irrigate same as for beets. Carrots are ready for use in eight weeks and remain palatable for six months or longer.

Market—The local demand for Carrots is all the year round, but the chief demand is from the shipper, who wants them from December 1st until May. For this trade the seed should be planted in August and September. The shipper wants the Chantenay, Oxheart and Danver Half Long.

There are many rabbit hutches within the city where carrots are used throughout the year. If you live a convenient distance from one of these places you may be able to secure a contract from the owner to furnish carrots. Chantenay and Danver's half long are now the favorites with large growers.



Oxheart

Beautiful shape and color. The roots generally attain four or five inches in length, and about three inches in diameter. Quality first rate, very tender, like the Early Gem, is the market gardener's favorite. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Improved Long Orange A deep orange colored variety adapted for farm or garden culture. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Chantenay Flesh is a deep golden orange color, always smooth and fine in texture, very tender. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Danver's Half Long The roots are smooth and of a rich, dark orange color. One of the best sorts for a main crop because it remains edible in the fields longer than other varieties. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Early French Forcing A small sort but desirable on account of its extra early habit. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

A & M Early Gem Somewhat resembles the Guerande or Oxheart, but is more uniform in shape, of finer texture and almost entirely free from the core usually found in other varieties. Flesh deep yellow, very tender and delicious in flavor. The roots generally attain from four to five inches in length and about three inches in diameter, although they have been grown to nearly double these dimensions. For bunching, the handsome appearance is a marked advantage over all other varieties. It is a favorite with many market gardeners. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

A & M STOCK CARROTS

Carrots are healthy food for stock of all kinds and should be more generally grown.

Culture—Drill in rows 12 inches apart, and thin to three inches apart in the row. It requires five pounds of seed to plant an acre.

Half Long White Belgian Is raised exclusively for stock. Grows to a very large size; is easily gathered. Makes splendid food for cattle, horses and hogs; known to yield forty tons per acre. Will keep four or five months after pulling. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.10) postpaid.

Large Yellow Belgian Is similar to the above, but said to be richer, but does not keep so well. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.10) postpaid.

Throughout the year we reply to thousands of inquiries for advice on every subject pertaining to Agriculture. We are always on the lookout for any new thing that may benefit the ranchers, and freely give the information.

We first advocated Progressive Dry Farming methods in 1902. We recommended the planting of legumes for green manuring and advised inoculation in 1905. We are now advocating the use of sulphur with lime as a fertilizer and to eradicate fungi and microscopic germs from the soil.

A & M Celery

Write College of Agriculture, Berkeley, Cal., for Bulletin No. 208, entitled "The Late Blight of Celery."

Culture—Sow one-half ounce of seed to 100 feet of drill; ¼ lb. per acre. Sow the seed from Jan. 1st to May 1st, in drills six inches apart, not too thick in the row to secure stalky plants. In June when the plants are strong, transplant to furrows three feet apart and six inches deep. Set the plants six inches apart in the furrows; as the plant grows fill the earth toward the plant to secure proper bleaching. Never allow dirt to rest on the heart of the plant. Never work in celery when it is wet with rain or dew. Spray frequently with Bordeaux.

Celery Rot—Do not allow water to stand during the heat of the day after irrigating. It will cause Celery Rot in the early crop.

Hollow Stem—When the growth is rank and the stalks so close that free ventilation of air is retarded during the hot weather, the stems become soft and hollow; therefore, we recommend the single-row planting.

Market—The local consumption and outlying distribution disposes of a very large acreage, but owing to its erratic nature it requires a peculiar soil and professional culture. Therefore, there are few localities where it can be forced to earliness. May, June and July celery brings a high price to the grower. Then there comes an oversupply until the shipper disposes of it. When a surplus exists cold storage is resorted to, with doubtful profit, on account of the perishable nature, the shrinkage and the expense.

Golden Self Blanching (French Grown Seed)—To the more dwarf type, we recommend the French grown seed, which was the standard for many years. (Pkt. 10c) (oz. \$1.50) (¼ lb. \$5.00) (lb. \$15.00) postpaid.



GOLDEN SELF-BLANCHING

\$300,000.00 Crop

Golden Self Blanching (California grown seed.) Another year has demonstrated that our strain of California grown seed is equal to the imported in producing good celery. Every grower in Florida who tried our California grown seed has ordered ever since in larger quantities. Our seed is now accepted by all who have used it as fully up to the imported. We offer it to you with our full recommendation. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.

California Grown Golden Self-Blanching Celery Seed is now the accepted standard throughout the United States, and is giving such complete satisfaction that American growers are accepting it with absolute confidence, asking only to know the reliability of the seed. That ours is reliable is proven by hundreds of satisfied growers.

White Plume California grown. Its stock, inner leaves and heart are naturally white, so that simply drawing the soil up against the plant and pressing it in is all the work required for blanching. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Celery Seed for Flavoring Per lb. 50c postpaid.

CELERIAC

Smooth Prague A large celery flavored root used extensively for flavoring soups, pickles, etc.; also relished as a salad. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

TAPE FOR TYING CELERY

Spools containing 1,000 yards in Red, White or Blue, \$6.75 per spool.

For hilling celery there is no better nor more convenient tool to do good work than the Planet Jr. Celery Hiller. See Planet Jr. Implements.

A Word About Celery Plants

Large growers cut the plants back several times during the growing period. This makes stocky roots. When ready to transplant, each plant is individually prepared by cutting the top back to two inches and all fibrous roots rubbed off and the top root cut to four inches. This makes better planting and the clean root soon sends out a new lot of feeders.

A & M Sweet Corn

Note Prices Given Include Postage or Expressage Prepaid.

Market.—There is a uniform local demand for sweet corn throughout the season, from the earliest day it is offered until the last field is harvested. Therefore prepare to have some coming all through the season. Oregon Evergreen has not been surpassed since we introduced it. It is yet the best for the market gardener and the most productive.

Culture — Plant from February 15th to September 1st in hills 18 inches apart, in rows three feet apart. Allow two stalks to the hill, break off all side shoots; cultivate after each irrigation until the corn shades the ground; irrigate every two weeks until in the milk, then once or twice a week, and this will produce a solid tight husk, which will prevent the worms from doing much damage.

We are ever on the lookout for something better than that which we have. We are constantly trying out new varieties that show merit, but we studiously refrain from offering to our customers anything new unless it is better than that which we have. It is this policy that has kept the Oregon Evergreen so prominently before you for many years as the money-maker for the market gardener.

A & M Oregon Evergreen

Oregon Evergreen corn now has the endorsement of every gardener that grows for the Los Angeles market. We are safe to say that any gardener growing this will show to his customers its superiority over all other sweet corn. It is many years since we first offered this new and distinct variety. The demand has grown each year until it is now practically the only variety offered on the Los Angeles market. The advantages of this corn over all others are its earliness, its large size, rarely less than eight inches long. The grains are full to the tip and delicious.

Oregon Evergreen.

The husk is very thick and folds so tightly over the grains that the worm does very little damage, compared with other varieties. It is desired by the peddler and groceryman because of its thick husk, and it can be held over two days before it appears old or wilted. It is very productive, often bearing five marketable ears. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

A & M Early Adams This is a blend between the Oregon Evergreen and the Eastern Extra Early Adams. The superiority of this strain over the former eastern-grown Adams is shown in its earliness, large size and sweetness. It is nearly as good as the Oregon Evergreen, and it is earlier and harder. It is one of the many good things that originated here. Although it may be frosted when six inches high it will come again. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

A & M Large Adams This is the best market variety to plant in August and September for late crop. It will mature in fifty-five days. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

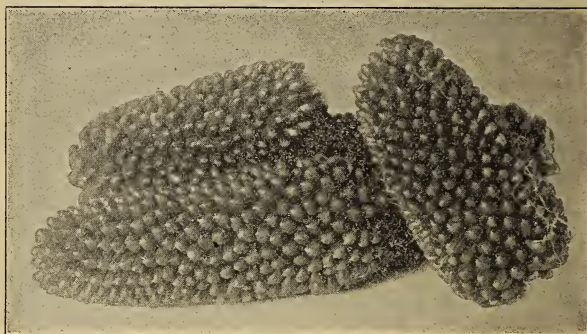
Golden Bantam Probably the very earliest variety grown. Very sweet, none better for the home garden for first early. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Country Gentleman A delicious sweet corn. The ears are somewhat smaller and less showy than the coarser varieties, but for private family use, where quality is preferred to size, it is excelled only by the Golden Bantam. The cob is very small, giving great depth to the kernels. The great merit of "Country Gentleman" is its fine quality. It matures in ten weeks. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Stowell's Evergreen If planted at the same time with earlier varieties and at intervals of two weeks until July 1st, it will keep the table supplied until November. It is hardy and productive, very tender and sugary, remaining a long time in a fresh condition suitable for cooking. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Black Mexican One of the best sweet corns for this section. Deliciously sweet and tender very productive. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Pop Corn



Doll Pop Corn

Rice Sharp pointed grain is preferred by vendors, but is not profitable to grow here at the usual price because of the devastations of the worm. (Per pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Pearl This is the variety so extensively grown locally. It yields enormously and at the present price is very profitable. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Yellow Large smooth grains of Golden Yellow Color. It pops large, has excellent flavor and is the most profitable to grow. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Doll Pop Corn The best of all for the home garden. The commercial pop corn roaster prefers it, saying it is the best of all, but he cannot get enough of it because the comparative yield is small, therefore, not profitable to grow in large acreage. But for the home it very much excels all other varieties. (Pkt. 10c) (¼ lb. 20c) (lb. 50c) postpaid.

FARM and HOME DRYING of FRUITS and VEGETABLES The Bureau of Plant Industry, United States Department of Agriculture, has issued Farmers' Bulletin 984, "Farm and Home Drying of Fruits and Vegetables," by Joseph S. Caldwell.

The bulletin may be had without cost by writing Division of Publications, United States Department of Agriculture, Washington, D. C. Also, consult your local Farm Bureau.

"I thank you for your catalog which is indeed worth all others put together. ROBERT O. ZUMWALT, Cal.

"Your catalog has come again. Please accept my thanks not only for your year book with its inspiration and practical help but for the delicate courtesy you showed me when in trouble." H. A. OWEN.

"Many thanks for your catalog. It is very instructive especially for a "new rancher." J. A. LA VERE, California.

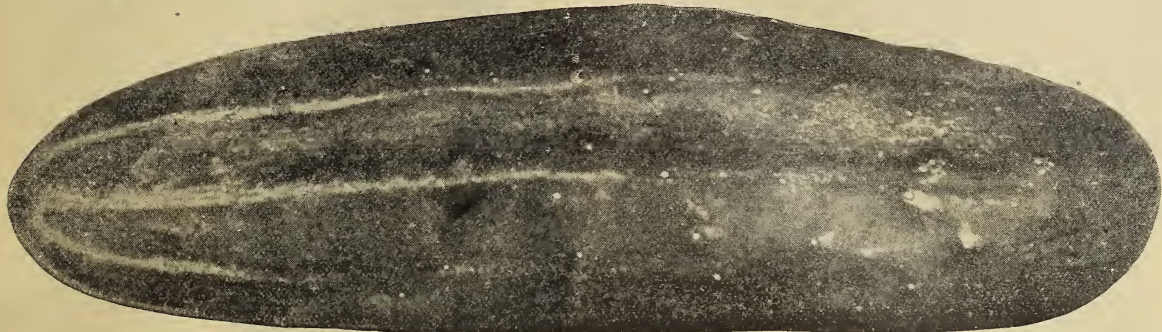
A & M Cucumbers

The United States uses annually 450 tons of cucumber seed.

Culture for hot-bed.—Make the frame $8\frac{1}{2}$ feet wide and as long as is desired, using 12 in. boards. Select a place with good loamy soil on a sunny slope. Mix the soil almost half and half with horse manure. About February 1st sow liberally with seed, in hills three feet apart each way. Stretch wire over the frame across and lengthwise. Sew muslin in widths and lengths to cover frame. Arrange to roll the mus-

lin on a stick as a curtain. Cover each evening, and open each day.

Field Culture.—Plant from March to October in hills 4 to 6 feet each way, 8 to 10 seeds to a hill. Cover an inch deep. When danger of insects is past, thin out the plants, leaving 3 or 4 of the strongest in each hill. It is ready for the table in six weeks from planting seed. One ounce of seed will plant 50 hills; two pounds to the acre.



Klondike Cucumber

Klondike This cucumber has steadily grown into favor since we first offered it. It is the one variety that made carload shipments possible because it is firm, dark green color, and stays green until consumed; turns neither white nor yellow with age, but stays green. It is a desirable size, just 7 to 8 inches long, symmetrical in shape, and especially crisp and palatable. It is an excellent variety for pickling when young, as well as desirable for the market. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Davis Perfect This is the ideal cucumber. Long, slender, dark green, tender and crisp. It is the best all around cucumber yet offered for the family garden, and the hot house. Do not hesitate to plant this variety. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

White Spine A popular, early variety for slicing. Very prolific, crisp and excellent for pickling when young. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Improved Long Green Dark green, firm and crisp; ten to twelve inches long, a favorite with home gardeners. Hotel trade like a long cucumber for slicing, this is ideal for such purpose. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Japanese Climbing Cucumber This variety should be grown more extensively; it is equal to others in quality and can be grown more economically in a small garden by planting near a fence or trellis of any kind, and climbs by tendrils as a grape vine. Whether space is a factor or not, we recommend it. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

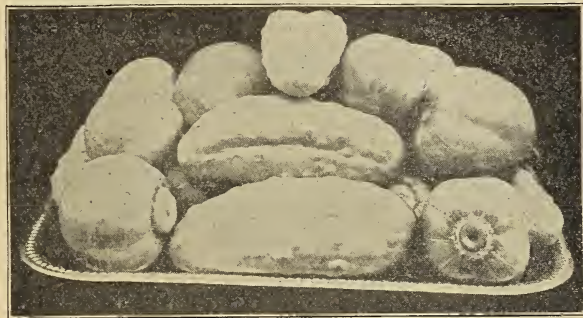
Everbearing Cucumber This variety is entirely distinct from all others on account of its close, bushy growth, and everbearing character. The first cucumbers are ready very early and the vines continue to flower and produce fruit continually until late in the season, whether the ripe cucumbers are picked off or not, differing in this respect from all other varieties of cucumbers in cultivation. A single vine will show at the same time cucumbers in every stage of growth, the smaller ones being perfect in shape, of a fine green color, just the right size for pickling. As they grow larger they are entirely satisfactory as a slicing cucumber.

We recommend this to be planted in home gardens at all times, but especially in September. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Chicago Pickling This is the variety that is grown for the Los Angeles pickling factories. Thirty-five carloads were shipped in, possibly as many more came by auto truck. Our seed has given these growers satisfactory results for years.

This variety is chosen because of its delicious quality and its shape, being one inch thick and three inches long when at pickling size. It is enormously prolific, bearing in clusters. We can recommend it for the home garden, but not for the market gardener, because it turns yellow soon after being taken from the vine. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Gherkin This cucumber is the most delicious of all the cucumber family when properly pickled. It should be more extensively grown. Planted where it may climb on a trellis, one vine will cover a section of fence eight feet high and twelve feet wide, producing possibly a thousand or more of the delicious and oddly shaped gherkins. It should be planted to shade a window or back porch. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.



Lemon and White Cucumbers

White Cucumber Three years ago there came to us a few seeds labeled White Cucumber, with a note from the sender, Mrs. Mony of Oakland, Cal., stating that she considered it "so far ahead of the other cucumbers that it ought to become more generally known."

The letter had such a kindly tone that we planted the seed and grew a very prolific patch of cucumbers light yellow in color. Same as the lemon and the delicious flavor and crispness was just like that of the now popular Lemon Cucumber.

It grows five to six inches in length two to three inches in diameter and remarkably uniform in shape. (Note the picture). This cucumber has the merit to become very popular. Be sure to send for a packet of seed. There is never a bitter one and none better for pickling. The seed is very scarce. We can only offer it in packets. (Pkt. 10c).

Lemon Cucumber At last after years of advertising and effort to educate the home-gardener to grow the Lemon Cucumber instead of the common long green type, we can now say that at least half the people are awake to the superiority of this delicious salad, and the other half will soon regret not having tried it earlier. Every one who has tried it is unanimous in its praise, and would not think of omitting it from the spring garden. It is the color of a lemon when ready to use, and similar in shape, being less pointed at the ends.

There is nothing but praise for the Lemon Cucumber. It may now be found at almost any vegetable stand, and no home garden should be without it. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

A Word About Cucumbers

Planted from September 1st to 15th, in a sheltered place, will produce delicious cucumbers all through December and late into January. This has been done frequently, but so much depends upon the changeable climatic conditions each season that there is always a risk of failure, but it is worth a trial because the expense is small compared with the profit if you succeed. Six hundred dollars from one acre of cucumbers during the month of December is easily possible.

To prolong the vitality of your vines, pick all of marketable size every other day, and do not tread upon the vines when picking. To grow prize cucumbers, mix a handful of nitrate with the soil about the hill when planting, and more as the vine grows.

A & M CHICORY

Large Rooted



WITLOOF CHICORY.

The roots, dug in the fall, dried, cut in thin slices and ground, are used largely as a substitute for coffee. Seed should be sown quite thinly in shallow drills early in the spring. When well started, thin out to stand two or three inches apart in the row and give good cultivation all summer. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Witloof Sow the seed in deeply prepared ground during June, July and August. Thin out to four inches apart in rows twelve inches apart. In December make trenches ten inches deep and twelve or fifteen inches wide, and loosen the soil for ten or twelve inches deeper. Set the roots three inches apart in rows six inches apart, within the

trench, so the tops of the roots are eight inches below the top of the trench. Then fill with sand, water thoroughly and cover with manure. In two to four weeks tender heads will form and be ready for use as a salad with French dressing.

This is a most delicious salad, and many Eastern growers are making a specialty of it, selling to hotels at fancy prices. We suggest it to our many mushroom growers, believing it will go nicely hand-in-hand with the growing and marketing of mushrooms. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

A & M COLLARDS

The Collard is an old-time favorite, adapted to all parts of the South, and as a producer of "greens" for boiling in winter and spring it has no equal. It will pay you to have a collard patch just to feed the chickens.

Southern Georgia This variety is the old-time favorite. Stands all sorts of adverse conditions without injury. Is very hardy. In many places where the soil is too poor to grow cabbage, the collard grows easily, and makes a good substitute for cabbage. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$2.00) postpaid.

A & M CRESS

Pepper Grass Sow curled or pepper grass thickly, in shallow drills, every two or three weeks. It should be cut often, and will continue to grow. It is used not only for salad, but on the breakfast table and for garnishing. Used with lettuce its pungency adds an agreeable flavor. (Pkt. 10c) (oz. 15c) (¼ lb. 50c) (lb. \$1.50) postpaid.

True Water Cress Should be sown in damp soil or if a stream of water can be utilized, it would be much better. It will also thrive well in damp cold frame. Rightly managed, its culture is very profitable. (Pkt. 10c) (oz. 60c) (¼ lb. \$2.00) postpaid.

A & M CORN SALAD

Culture—Sow any time from Oct. 1st until February. Plant and cultivate the same as lettuce. It is hardy in this climate. It is used for garnishing in the same manner as parsley or cress. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) postpaid.

CHERVIL

Curled Chervil Seed should be sown only during the cooler months in rows 15 to 18 inches apart and thin to 4 to 6 inches apart in the rows in good garden soil. Chervil is used for garnishing and flavoring. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) postpaid.

Read

You will need Sprays and Sprayers to destroy insects and fungi. See pages devoted to Insecticides and Sprayers, also Fertilizers.

DANDELION

CAUTION:—We have discontinued the sale of the Dandelion as an herb because it is an obnoxious weed and should be destroyed wherever it appears. If it is neglected it will soon spread over your lawn, crowding out all the grass.

Pull it out with A & M Weed Puller.

Devote a small plot in your garden to the growing of herbs. They add to the taste of things what daintiness adds to the looks of things, and many of them may be enjoyed all the year 'round.

There is an increasing demand for Basil, Dill and Thyme for use in canning and pickling. It may prove profitable to contract to grow these herbs for that purpose.

A & M EGG PLANT

Market:—The sale of Egg Plant does not compare favorably with other produce, and the consumption is not large. It is owing to the productiveness of the Egg Plant which makes it at all profitable during the season of abundance. A small acreage yields enormously, but it is the very early Egg Plant which makes a profit, such as \$1000.00 per acre. May and June are considered early.



New York Improved Spineless Egg Plant

and mature marketable fruit the following May. Egg Plants require four to six months to mature. One-fourth pound of seed is sufficient to plant an acre.

New York Improved This variety has superseded all others, both for market and home use. The large size and high quality of its fruit and its extreme productiveness make it the most profitable for the market gardener. It is spineless, which is a great advantage in shipping. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

Black Beauty Is preferred by growers for the early size fruit earlier than any other variety, and because the fruit is dark colored, when quite young and uniformly over the entire surface. It is entirely free from spines. It is popular because it is a moneymaker. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

The Tree Egg Plant This variety is of medium size and extremely good shape, being particularly adapted to slicing, as there is no waste of material. It resists drouth and bad weather to a wonderful degree, partly on account of its strong, upright growth. It bears its fruit sometimes one or two feet above the ground, thus escaping liability to rot. It is very satisfactory for the home garden. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.

A & M HERBS

Herbs in general, delight in a rich, mellow soil. Sow the seed any time throughout the year, in shallow drills one foot apart; cover lightly with fine soil, and when up a few inches, thin out to proper distances apart, or transplant into prepared beds. Care should be taken to harvest properly; do this on a dry day, just before they come into full blossom. Dry quickly in the shade, pack closely in bottles or dry boxes to exclude the air; this will insure their being preserved in good condition for future use. Varieties in the list marked * are perennials.

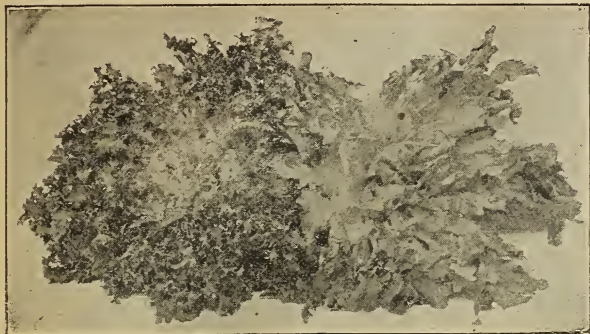
Leading Varieties

	Pkt.		Pkt.
Anise	10c	*Peppermint	10c
Borage	10c	*Rosemary	10c
Burnet	10c	*Sage	10c
*Caraway	10c	Saffron	10c
Caraway seed for flavoring, per lb. postpaid.....	50c	Sorrell	10c
*Catnip or Catmint.....	10c	Summer Savory	10c
Coriander, lb. 50c.....	10c	Sweet Majoram	10c
Dill	10c	Sweet Basil	10c
*Fennell, Sweet	10c	*Thyme	10c
*Lavender, Sweet	10c	*Winter Savory	10c
		*Wormwood	10c

PLANT DILL

Every year there is such a demand for green dill that the supply is short of the demand. Plant in any quantity, from ten feet square to one acre, but not more. Make several plantings to have it drag along, and sell what you can of the green dill and dry the balance

A & M ENDIVE



Golden Heart

Batavian

Culture—Same as for lettuce. Seed may be sown any time during the year. When plants are well started, thin out to ten inches apart or they may be transplanted. When plants have reached a good size, gather the leaves closely together and tie loosely in an upright bunch. This blanches the inner leaves in about ten days and adds to the crispness as a salad, as it renders the flavor mild and delicate. One ounce will sow 400 feet of row.

This plant furnishes an attractive and appetizing salad for the fall and winter months; by repeated sowings a supply may be had nearly all the year 'round.

Green Curled Golden Heart Leaves are finely cut or lacinated, giving the plants a rich, mossy appearance, which is greatly enhanced when the centers are nicely blanched.

This is the variety generally preferred because it blanches to a beautiful golden yellow. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

White Curled This beautiful variety does not need blanching to prepare it for use, the mid-ribs being naturally of a pale golden yellow, the finely cut and curled leaves are almost white. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

Batavian or Escarol Forms large heads of broad, thick leaves, which can be blanched for a salad or it will make excellent cooked greens, as well as being useful to flavor soups, stews, etc. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

GOURD

Culture—Gourds are tender annuals, of trailing or climbing habit. The seed should not be planted until the ground is warm. Plant in hills and cultivate as cucumbers. Leave only two plants in a hill, and allow the vines to ramble or train over a trellis for shading windows.

Dish Rag Gourd The peculiar fibre within the gourd gives it its name. The fruit grows about one foot long. The interior fibre is serviceable for a variety of household purposes, being used as a dish cloth, or sponge. The fibre is tough, elastic and durable. (Pkt. 10c)

Mock Orange A good old sort, the gourd often finding its way into the family sewing basket. A beautiful and rapid climber, quickly covering trellises. (Pkt. 10c)

Hercules Club This often grows to a length of four feet. This is not the same as the New Guinea Butter Bean which it resembles. (Pkt. 10c).
Dipper—Bowl with long handle. (Pkt. 10c).
Bottle—Bowl with short handle. (Pkt. 10c).
Pipe—Often made into pipe for smoking tobacco. (Pkt. 10c).
Ornamental—Small odd shapes and colors. (Pkt. 10c).
Nest Egg—(Pkt. 10c).
Mixed Gourds—(Pkt. 10c).

The Mexican knows the value of the Gourd for arbor purposes. It is a rampant grower in this climate. The Gourd is used for as many purposes as it has shapes. Bowl, dipper, pipe, trough, nest egg, bottle, dish-rag and ornamental. Buy a packet of mixed Gourds.

"I have bought seeds from you for several years and have recommended them to many of my neighbors, because they are the best on the market."

EDWARD MORGAN, JR., Kanai, T. H.

"I surely thank you for all your kindness."

EMILY L. BLACKLIDGE, Ala.

Edible Gourd



New Guinea Butter Bean as an Arbor

AN EDIBLE GOURD

Plant Same as any Gourd

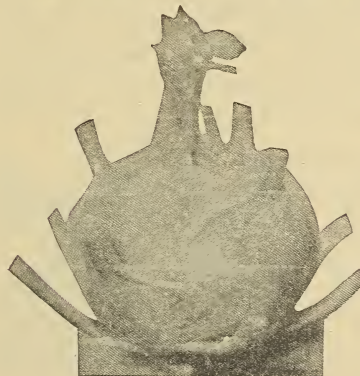
Lately advertised as New Guinea Bean. Has been a common table vegetable in China from time immemorial.

All of us have curiosities and many persons have reported to us how "Good is this New Guinea Bean." We tried it and sure enough we found it even better than the most delicious marrow. (Pkt. 10c) (oz. 30c) (1/4 lb. 90c) postpaid.

Recipe: Take fresh from the vine a young gourd about sixteen inches long and three inches in diameter or smaller, while the fuzzy growth is yet on. Cut into cubes about 3/4 inch, bring to a boil, pour off the water once or twice. Season well with pepper and salt, add butter. You will be surprised how good it is.

"I planted some of your New Guinea Beans last summer and they made absolutely the best shade I ever saw. Here is a new way to cook them—Use the ones from 8 to 14 inches long. Wash them. Wipe dry. Cut the round way. Dip in batter then in flour and in batter again. Fry until tender. They are delicious. To make the batter use one egg, one tablespoon flour, and one cup milk with salt and pepper."

A & M Kohl Rabbi



A & M Kohl Rabbi

Culture—Seed may be sown every month in the year. Drill on ridges same as beets. Thin to three inches apart. An ounce of seed will produce 2000 plants.

Early White Vienna

The earliest sort, very tender, excellent for table use. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

Early Purple Vienna

Similar to above, but has flesh of purple color. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

"I thank you for your very nice catalog; it is such a help to a person raising a garden."

MRS. ROSA POE, Cal.

We have been liberal with advice regarding selection and culture of vegetables, but read also our flower pages. Here, too, we have endeavored to help you make selection, and to succeed with it.

Look over our list of bulbs; it requires little skill to grow them and many will bloom successively for many years, needing only to be thinned and reset about every third year. "Your seeds have always proved excellent."

C. M. LOVETT, Cal.

A & M KALE



Tall Scotch Kale

Culture—Seed should be sown thinly in drills, about the middle of June for the tall sorts; transplant the young plants twelve inches apart in rows three feet apart. Later in the season the dwarf sorts may be sown rather thickly in drills to furnish small heads to be cooked like spinach. One ounce to 100 feet of drill.

Tall Scotch This makes a beautiful plant, 3 to 6 feet tall. (Pkt. 10c) (oz. 25c) (¼ lb. 65c) (lb. \$2.00) postpaid.

Jersey Kale A tall variety with smooth leaves. Especially used for poultry greens. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Siberian or Thousand Headed Kale We believe this to be superior to other varieties because it grows more greens for poultry, and is of better flavor for the table. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

There is no better green feed for poultry nor none more easily grown. It may be transplanted at any vacant place in the garden.

A Compost Pit

Do not burn any dead Bean vines or other vegetation, but dig a pit about two feet deep, in some out of the way place. Put into it all vegetation from which the crops have been gathered. Add to it all the chicken manure and ashes that may be available and when about to use it add some Toro Sulphur. Mix it thoroughly occasionally so it will not overheat. This will give you without cost all the fertilizer you will need for your garden. Do not neglect this.

"The seed arrived O. K. and you will be surprised to know that some are up already. It seems funny to be ordering from Los Angeles but you had what I wanted, so why not? Here is another small order."

DR. R. C. RUSH, Ohio.

"I was well pleased last year, all crops turned out good."

J. D. GRUBER, Cal.

"I will want more seeds later on. Your seeds last year proved highly satisfactory to us in every way."

WILL H. GRAY, Cal.

"I know that your seed is the best I ever planted because other seed wouldn't grow."

LINCOLN S. KANAI, Hawaii.

"The catalog came and let me say I am much pleased with same. I have seen a good many seed catalogs, but will say this one is the most complete and comprehensive one it has fallen my lot to look over."

"H. R. WARD, Florida."

A. & M. LETTUCE

In Bulletin No. 160, entitled, "Lettuce Growing in California," by Prof. Stanley S. Rogers, published by the University of California in 1917, the author predicted great development of the lettuce industry in California because of the growing demand for California-grown lettuce. His prophecy has been fulfilled beyond his wildest imagination. At that time approximately 2000 acres were planted to lettuce for shipping.

In 1906 we started this enormous industry that now outclasses in acreage and monetary value every other vegetable that is grown in California.

In 1917 there was shipped from Imperial Valley, 413 cars. In 1921 there was shipped from the same valley 3,380 cars. But this does not tell all. Other large shipping centers have grown in like proportion. Enormous acreage is grown in San Fernando Valley and throughout Southern and Central California and in the Sacramento Valley. Oregon, Idaho, Tennessee, Texas and Florida are all now growing the Los Angeles Market Lettuce.

J. H. Tull Superintendent of Markets, Memphis, Tenn., writes: "I feel safe to say that the Los Angeles Market Lettuce is by far the most popular that we grow."

Peter Gardner writes from Florida: "Last season your Los Angeles Market Lettuce beat Big Boston badly, many heads weighing three pounds."

The 1922 crop of lettuce in Southern California was almost entirely destroyed by the freeze in January except in Imperial Valley. Here the growers realized \$500 per acre and in many instances as much as \$1,000 per acre.

The 1923 crop in Imperial Valley is estimated to be 12,000 acres.

Credit must be given to the purity of our seed for building up this enormous business and the wise grower will prefer our dependable seed rather than buy seed that has no pedigree. He cannot afford to do otherwise.



How to Grow Lettuce

CULTURE (See Picture)

Lettuce is very exacting as to soil requirements. It is best suited to a rich, light loam, and should never be planted on soils of poor quality. Irrigation is necessary throughout the entire growing period, except during the rainy season, but the crop is easily ruined by an excess of water. The crop stands 32° of cold better than high temperature, and in many of the interior valleys of the state it is impossible to raise lettuce of good quality during the summer.

At the time of planting the soil should be rich and in the best physical condition. Many growers each year plant cow peas during the summer period when they cannot grow lettuce in order to enrich the soil and put it into good condition.

The plants should be grown on ridges six inches high, fifteen inches wide on top and eighteen inches between ridges. Sow the seed with a hand planter two rows on a ridge and thin out leaving one plant every twelve inches.

Water should be run between the ridges and not flow over the tops, and should never be allowed to cover the plants. There should always be an adequate amount of moisture in the soil from the time the plants have commenced to head until they have matured. The hoeings necessary on raised beds will vary from one to three times. The earth around the plants should not be allowed to harden.

In the interior valleys and especially in Central California plants set in the field during September should mature during December.

It requires ninety to one hundred days to mature a solid head. When cut too soon it cannot be solid but soft and inferior. One week too early may cause a loss of twenty-five to fifty per cent of the crop in size of the heads.

"We think your catalog very valuable and a great aid to every gardener."

MRS. C. A. THOMAS, Cal.

"Your catalog is splendid, 'chuck' full of good information and best of all are your seeds. I tested them thoroughly on my farm in San Joaquin Valley."

A. C. CANFIELD, Cal.

"I have your catalog for 1921. It is extraordinarily excellent and you certainly deserve great credit both for making it up and for publishing it. I hope the one for 1922 may be at least as good. I hardly see how it could be better."

GEO. REED, Los Angeles, Cal.

A & M Lettuce



A & M Los Angeles Market or New York Special

This is the variety that has made Los Angeles the richest agricultural county in the United States. We introduced this lettuce and started the long distance shipping when we shipped the first crate to Philadelphia in 1904.

It is the largest and most solid heading variety in existence, often weighing 2½ and 3 pounds a head and always a prize winner. N. H. Cramer writes from Florida: "I took first prize at the St. Lucie County Fair with your Los Angeles Market Lettuce. I am sending some to the fair at Tampa and expect to get the prize there."

Iceberg This is next to Los Angeles Market as the heading variety for the Southwest for the summer planting. Of course it is better during the winter months, but not so solid as the Los Angeles Market, which is strictly a winter variety, while the Iceberg is a good all-season lettuce, and hundreds of carloads of Iceberg are being shipped when the other is not available. Iceberg Lettuce planted later than March 1st should be grown on dark, heavy soil, because if grown on light, sandy soil, the heat of the sun reflected from the sand on the under side of the leaves causes them to burn almost to the heart.

The light green, curled, red-tinged leaves of the Iceberg form heads as large as the Los Angeles Market, but not so solid, but it is as tender and crisp, and is of excellent flavor. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Big Boston Very large, smooth-leaved, solid-heading variety grown extensively throughout the east and south. It is congenial to all climates, and is a good shipper. In flavor it probably excels all other smooth-leaved varieties. An excellent all-year 'round lettuce. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Hanson Without exception this is the best variety for late spring and mid-summer crop. Prof. F. W. Mally, Farm Demonstrator of Webb County, Texas, discovered Hanson Lettuce to be resistant to both heat and disease, and particularly resistant to eel worm which is often prevalent where least expected. Hanson Lettuce is similar to the Iceberg Lettuce, except that it has not the tinge of red. We recommend it for the home garden. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

It is our aim to offer only that which we know to be the best of its kind for the purpose for which it is recommended.

You need look no further, the best of everything is listed here.

The big planting time is during September and October when the new seed has just been harvested. This new seed germinates so irregularly that planted during September it will keep coming up until January. On this account we always have a supply of seed carried over from the previous season which germinates quickly and uniformly. Our seed has such a reputation for reliability that many growers will have no other. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

Early Curled Simpson This is a very popular variety as a loose leaf lettuce. The leaves are large, thin, very tender and of a very good quality. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.



Paris White Cos

Paris White Cos

This might well be spoken of as the "Aristocrat" for the reason it is used almost exclusively at aristocratic clubs and hotels for salads, because it is crisp and has a delicious, nutty flavor.

Gardeners would profit to give more attention to this variety. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Grand Rapids Similar to Early Curled Simpson. The luxuriant growth makes it a desirable variety for the poultryman. It is also an excellent variety for the table and good all the year. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

NOTICE POULTRYMEN!

Chicken Lettuce A coarse lettuce that grows four feet tall, supplying an abundance of leaves. Just the thing for poultry. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75)

A & M LEEK

A & M Leek We believe in having the best of everything. With this idea always before us, we have secured this fancy strain of leek. It is large, white, tender and mild—the best in the world. Its mild, delicate flavor makes a delightful addition to lettuce salad. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.15) (lb. \$3.50) postpaid.

A & M Mushrooms

One of the most profitable crops for the outlay that can be grown. The market is sure, because the supply never equals the demand. Mushrooms can be grown in any dark room or cellar where the temperature can be kept at 50 to 75 degrees. The main conditions in mushroom growing are proper and uniform temperature, and very rich soil. One pound of spawn is sufficient for a bed 2x8 feet. We have the very best spawn obtainable. If interested, write for circular.

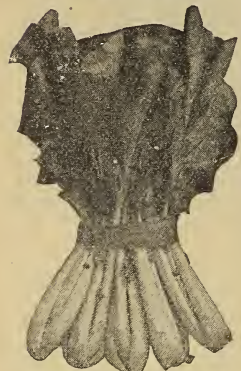
Pure Culture Spawn—Brandywine—Put up in bricks. (Per brick 40c) (5 bricks \$1.75) prepaid.

Address University of California, College of Agriculture, Berkeley, Cal. Ask for Circular No. 84, entitled, Mushrooms and Toadstools.

Many inquiries come to us from would-be growers of mushrooms. Our reply is not always encouraging because many growers have marvelous success for a time, but we know of not one permanently prosperous grower. There seems to be an element of uncertainty.

If you have a favorable spot on your place, try it.

A & M Mustard



Chinese White Mustard

Yellow Seeded

Used extensively for spicing, pickling and other culinary and medicinal purposes. The young plants make delicious greens. (Pkt. 10c) (oz. 20c) (lb. 50c) postpaid.

Southern Giant

The true curled-leaf variety so popular in the South for planting in the fall. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.

Ostrich Plume

Is delicious as well as ornamental; the leaves resemble ostrich plumes, hence the name. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. 1.50) postpaid.



Chinese Green Mustard

Chinese White

This is a delicious vegetable and flavors strongly of Brussels Sprouts, being less pungent than the American varieties. It is greatly relished by the Orientals, and can be seen all the year 'round at vegetable stands kept by the Japanese and Chinese. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

Chinese Green

This is an Oriental vegetable, and like the White Mustard, is grown all the year 'round, but like our American Spinach, thrives best in the winter season. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

"Received your 29th annual catalog. Many thanks. The most instructive catalog on seeds and soil I ever received. Please send me your bulb catalog."

EARL W. KLEMM, Ind.

"Many thanks for bulbs. I certainly expect to enjoy them. I am sending a list of those I know would be glad to receive and benefit by having your catalog. I would not know how to get along without it or your seeds."

MRS. J. C. KEYES, Los Angeles, Cal.

Protect Your Plants Against Frost and Insects

Paper Plant Covers

THE ONLY SURE PROTECTION

For Early Cucumbers, Melons and Squash



In response to numerous inquiries as to how long the paper caps should remain we have here a picture of a field showing that when the cap became crowded the top of each one was torn open with a knife or sharp stick.

This gave the plants room to spread and they should be allowed to harden for several days before the papers are removed and the hills thinned to two plants.

The above picture was taken just after the caps had been torn.

The Paper Plant Cover is the only sure protection against late frost and insects during the early growth of your vines and at an insignificant expense as compared with the cost of insecticides, the continual labor of combatting insects and other pests, and the cost of replanting, besides having a large percentage of vacant hills.

THE PAPER PLANT COVER prevents all this at a cost of less than 1 cent per hill.

We have two grades of paper; either grade is good enough to endure the season. Samples will be furnished upon request.

Size	Approx. Wt.	Glassine Unbleached Plant Covers			
		Per M	Per M	Per M	Per M
15x16	15 lb. 3 oz.	35c	\$ 2.75	\$ 2.65	\$2.50
16x18	17 lbs.	45c	3.20	3.05	2.95
Wax Plant Covers					
15x16	17 lb. 4 oz.	45c	3.55	3.45	3.30
16x18	19 lbs.	60c	4.00	3.90	3.80

CULTURE FOR MELONS

The soil must be thoroughly soaked down to submoisture, either by rain or irrigation. When dry enough plow ten or twelve inches deep. Thoroughly pulverize the soil. Make furrows eight to ten inches deep.

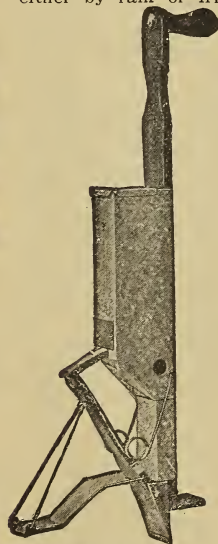
Plant the seed in the furrow at regular distances apart, six feet for muskmelons; eight feet for casabas, and nine feet for watermelons. Plant from Feb. 15 until July 15. For late shipping June is the best month for planting the Golden Beauty.

As the plant grows gather the soil around it until the roots are twelve inches or more below the surface. Thin out all surplus plants as soon as they are hardy and well established. The rows are now straight and an equal distance apart. This makes it easy to cultivate close to the hills, both lengthwise and crosswise. Cultivate deeply as long as there is no danger of disturbing the roots. Be always mindful that the roots are as long as the vine, therefore, when working close to the hills and among the vines, let the hoeing or cultivating be shallow.

Always cultivate the irrigation furrow as soon as it is dry enough to mulch nicely.

If this rule is intelligently adhered to your vines will never suffer from drouth, or root blight, and will be healthier in every way, because the roots are deep down in the cool, moist earth unaffected by the heat of the sun. This is the secret of success with all midsummer planting.

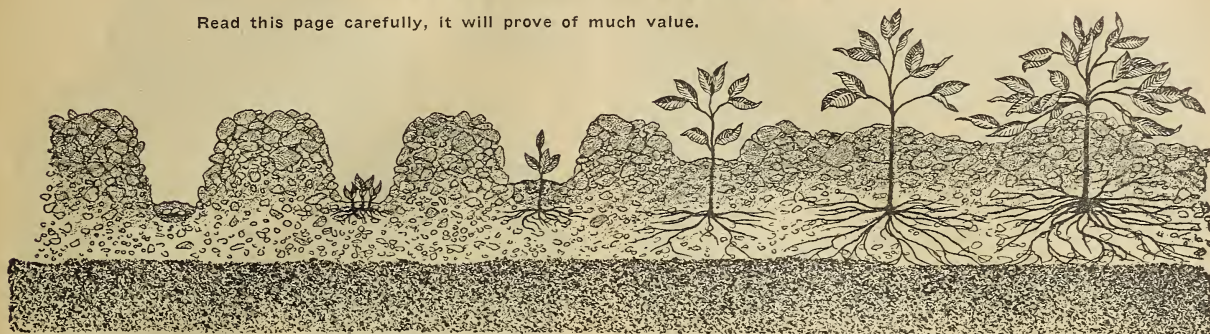
The Segment Planter was made to plant corn. In order to plant muskmelon seeds it is necessary to make the hopper tighter. A few nails will do the work.



All large melon growers are now using the Segment Corn Planter—it does the work better. Price \$2.00 f. o. b. here. Wt. 5 lbs.

Deep Planting to Insure a Healthy Growth Without Irrigation

Read this page carefully, it will prove of much value.



Planting Second Week Third Week DEEP CAREFULLY (STUDY PICTURE)

Pulverize the soil thoroughly 10 inches or deeper. Make your furrows deep; plant the seed in the bottom of the furrow, and cover one inch deep for the vine seeds and two inches for potatoes. In one week the sprout should be above the ground and the plant well rooted. In two or three weeks the vines will be beyond danger from the beetle and should be thinned leaving two plants and the earth drawn toward the plant until it is all but buried; each time the field is cultivated the soil should be thrown toward the plant until the roots are ten inches or deeper.

This method applies to transplanting as well as to planting seed.

If this method is followed, there will be little danger from blight and the vines will be healthy enough to resist other diseases and aphids.

Where dry farming must be practiced and where the soil is heavy it is advisable to cultivate the soil several times during the early spring and have it thoroughly pulverized and warm by the middle of May or early June.

Then is the best time to plant summer crops, sorghums, vines and beans.

Fifth Week

Seventh Week Last Cultivation

DEEP TILLAGE

Some common sense hints applicable both for planting seed or for transplanting. Where water is available, but more particularly where no water is available.

Many annual crops fail because of a shallow root system. The roots called "feeders" spread out above the plow sole (the hard soil that underlies the surface mulch). For summer crops this mulch should never be less than eight inches deep but preferably deeper.

Where the soil is very sandy the heat on a hot sunny day will penetrate four inches, and the roots will suffer, if the soil becomes dry the roots will die; the plants become sick, and a fit subject for aphids or for any disease from which a healthy plant is immune.

If the soil is heavy, clay or adobe the shallow root system is imbedded in the hard dry surface and cannot survive.

Then too a shallow root system will be injured by the cultivator.

The solution is deep tilling of the soil and deep planting in order that the roots will, at all times be in cool moist earth and below the reach of the cultivator.

A & M Casabas

The best way to keep the Casaba late into the fall is to gather them together about the hill and cover them completely with the vines, but do not pick them off the vine.

The Casaba is a great credit to Aggeler and Musser Seed Company. The Original Winter Pineapple Casaba imported from Persia fully forty years ago was the only Casaba grown in America until in 1899. We discovered a Hybrid. We at once recognized it as something different and far superior to the parent Casaba. It is due to our persistent advertising and to our vigilance in keeping the seed pure that we have today this wonderful Hybrid Casaba.

In the meanwhile the original Winter Pineapple developed a sport that showed a tendency to turn yellow. Under the direction of Mr. Sprinkle of Burbank this tendency toward yellow was encouraged until perfected and "Fixed." We then introduced the Golden Beauty and maintained its purity. It rapidly superseded its parent Casaba in popularity to the extent that one rarely sees a green one on the market. The Golden Beauty is now one of the melons of commerce just as is the Rocky-ford or the watermelon and the shipments over the country runs into thousands of carloads.

The Golden Hybrid is growing in popularity because of its color, but while a better seller it is just as good but no better in flavor than either the large or the improved Hybrid, but always bear in mind that every Casaba is a good one but none are good until you can make an impression with the thumb just as in a mellow apple.

Do not hesitate to buy Casabas but do not cut them until they are mellow.

Imperial Valley has demonstrated that the earliest Casabas may be shipped with the late canteloupes and are more profitable.

Santa Claus

The name is appropriate to the melon. It is a delightful present to send to your Eastern friends at Christmas. It is of delicious flavor, beautiful in its mottled gold and black coloring, and readily keeps until January. We advise that it be grown more extensively for the local trade. The supply has



Santa Claus

not been equal to the demand for several years. (Pkt. 10c) (oz. 25c) (1/4 lb. 80c) (lb. \$2.50) prepaid.



A. & M. HYBRID

The Prince of all Casabas—Introduced by us in 1902

A & M Hybrid

This is a cross between the Winter Pineapple and the Montreal Muskmelon. It grows to a very large size and is of delicious flavor. It is a rampant grower and yields enormously; as many as seventeen large melons were taken from one vine. It is profitable early and late. This melon is now grown as extensively for a midsummer crop as the muskmelon, and finds a ready sale. It originated locally, and is as distinctly a Los Angeles product. The local and traveling public are now fully awake to the delicious flavor of this Casaba. For the home garden or for the market plant the Prince of All Casabas.

Plant from March 1st until July 15th. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (1/2 lb. \$1.10) (lb. \$2.00) postpaid.

A. & M. CASABAS—Continued

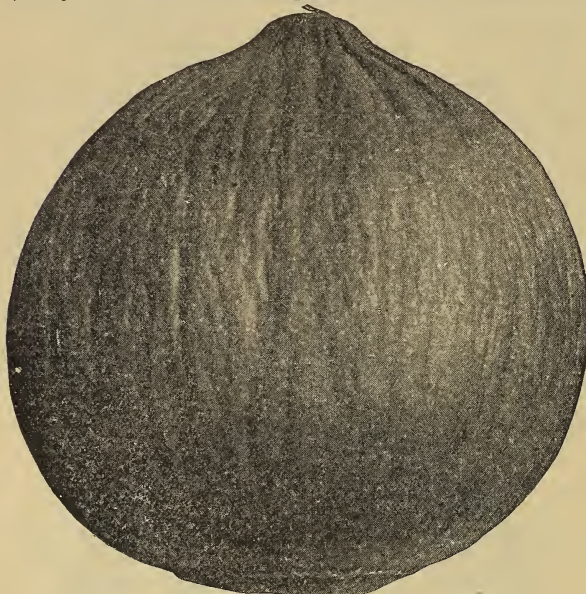
Winter Pineapple This is the first of Casabas introduced into America. We have carefully maintained the purity of type so that it is now just as distinct as when introduced more than forty years ago. This and the Golden Beauty are identical in all except color, which when mature is light green. The Winter Pineapple is more profitable as a late melon, therefore we recommend to growers near the Coast that it be planted during June. Our type of Winter Pineapple is round, selected for its good shipping qualities. (Pkt. 10c) (oz. 25c) (¼ lb. 80c) (lb. \$2.50) postpaid.

Golden Hybrid Last year we urgently advised the planting of Golden Hybrid, saying the golden color is much in its favor; also that the grower having the Golden Casabas would have preference from the buyer. A few growers took our advice and reported that we were right. Mr. Barnhart says: "His Golden always sold first and as for quality they are just as good as the green and have less tendency to crack open. The rind is just a little bit harder than the green."

Now growers all we can add is that it is your loss if you will not plant the Golden Hybrid.

The grower who will supply the market with the Golden Hybrid will be the first to sell and command the highest price. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

There were more Golden Hybrids on the market this season than ever before. The dealers say there is no doubt about it, they sell better than the green one.



Golden Beauty

Golden Beauty Introduced by us in 1906, it at once became popular locally. It is now grown more extensively throughout California than any other Casaba because of its beautiful appearance, excellent shipping qualities and delicious flavor. It is the Casaba that added much to the fame of California, as well as adding a million dollars each year to the wealth of the state. (Pkt. 10c) (oz. 25c) (¼ lb. 80c) (lb. \$2.50) postpaid.

Golden Honey Casaba This is quite distinct from the other casabas, and you will believe it has some special merit not possessed by the others or we would not offer it. Its great merit is its good keeping, good shipping, good looking and good tasting qualities. It is round as a cannon ball, size of a coconut, yellow as an orange, hard and solid as a baseball. May be shipped to New York in November and served for breakfast at Christmas to the delight of the consumer. The melon imparts a delightful fragrance.

Size 6 inches in diameter. Wt. 4 lbs. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00) postpaid.

STORY OF IMPERIAL VALLEY CANTALOUPE CROP

This is the 1922 story of the cantaloupe crop in the Imperial Valley as reported to the California Department of Agriculture by County Horticultural Commissioner F. W. Waite. A total of 32,432 Imperial acres was planted to cantaloupes in 1922.

The season occupied slightly over seventy days.

First express shipment, May 13; first solid car, May 28; Season closed July 24.

Total shipments 1922 were 12,198 carloads and 4,566 additional crates.

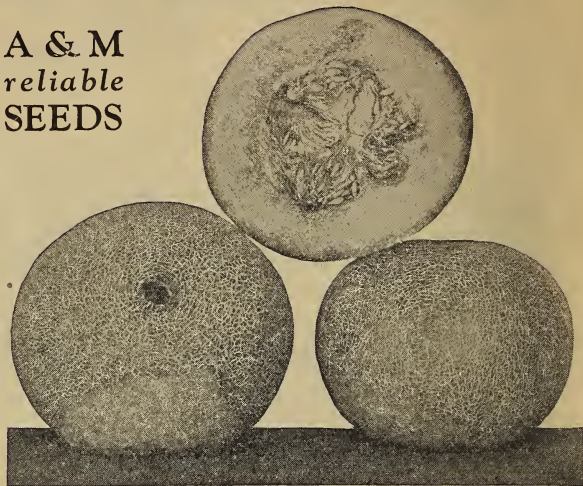
On June 28, 649 cars that would have made a solid train five and a half miles long went forward.

This one movement included 208,000 crates of 11,300,000 melons.

Our Pollock 10-25 is the melon that did it.

A & M Persian Melon

**A & M
reliable
SEEDS**

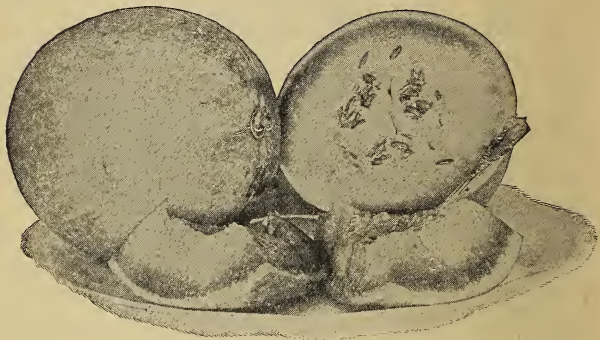


A & M Persian

Culture the same as for muskmelons. For several years we have labored to get this melon pure. Heretofore the greatest drawback to the grower was the large percentage of off-type and culls. But at last we are able to announce that our seed field was practically 100% pure; therefore, do not hesitate to plant this melon. It is in a class by itself. Large, extremely netted, without ridges, thick yellow flesh of delightful flavor. A good keeper and a good shipper. It should be picked while yet quite solid. Customers should be educated to purchase half a dozen at a time and set them away to be eaten as they become mellow like a Casaba. When properly picked they are ready for the table within six to ten days. (Pkt. 10c) (oz. 60c) (¼ lb. \$2.00) (lb. \$6.00) postpaid.

A & M Honey Dew

The melon with an appropriate name



A & M Honey Dew This melon has won its way in to favor wholly because of its excellent flavor and good keeping qualities. It is enormously prolific. It is ready to pull when the green luster has changed toward a creamy yellow. It is not ready to be eaten until like the Casaba, you can make an impression with the thumb as in a mellow apple.

The picture is typical of its shape; the average size is about as large as a coconut, but the smaller sized melons are not inferior in flavor. Every melon is a good one. Flesh is light green and sweet as honey. The rind is light green or silvery-gray in color, smooth as an egg and hard as the rind of a winter squash. It is therefore a good shipper. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Speaking of Honey Dew

"I have the most wonderful patch of vines and melons a man ever looked at. They look like a mass of sweet potato vines, still blooming heavy and making worlds of little melons and the ground is covered with large ones now. I bought the seed of you."

J. O. POLHEMUS, Texas.

Yellow Fleshed Honey Dew When the Honey Dew Melon was introduced it quickly became popular. One would not believe another melon could be better, but the Honey Dew hybridized with the Tip Top produced a melon of the same outside appearance as the Honey Dew but with a deep yellow flesh that is positively more delicious. Do not hesitate to plant it if for the home garden or for shipping. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

A & M Muskmelons

The United States uses annually 300 tons of muskmelon seed
YELLOW FLESH VARIETIES



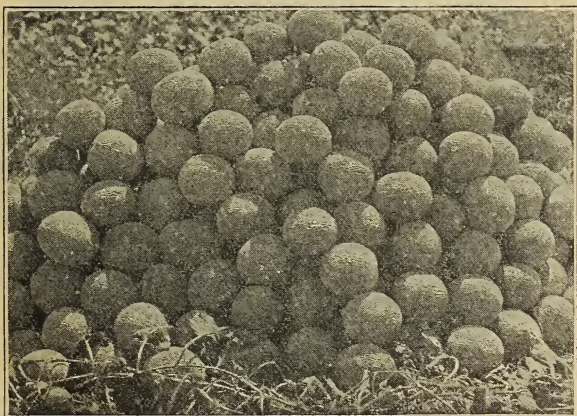
A & M Famous Indiana

The Famous Indiana This picture perfectly portrays the melon, which has a rich yellow flesh and a flavor that may be compared with the Persian.

In offering this melon we are quite in line with our established policy of bringing to your attention only the varieties that have been tried, proven and known to be of exceptional merit. We did the experimenting. You take no risk. Do not hesitate to plant the Famous Indiana, it is a "Best Seller."

A letter from our Superintendent says: "All melons are fully up to your description. The Indiana is by far the best melon that I am growing for you; the seed is very pure, as all the melons are uniform in appearance. It is heavily netted, very thick meat and holds up in good condition for several days. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid."

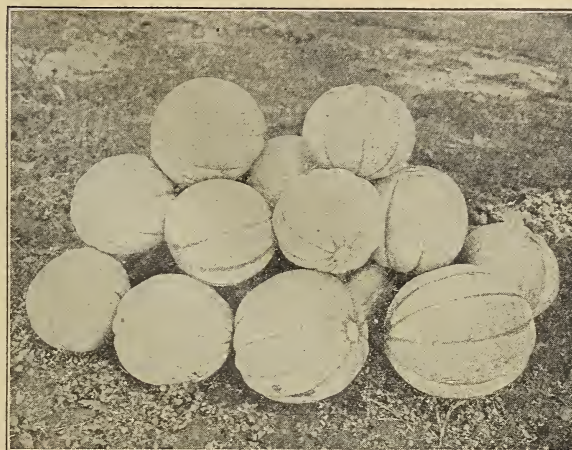
Improved Burrell's Gem Has established itself as one of the biggest yielders. The shipper calls for it because it is solid and carries well in transit. The consumer wants it because of its excellent flavor. The growers all want our seed because we have the best strain. Many growers who bought of us last year have engaged their seed for next season. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.



Pollock 10-25

Pollock 10-25 This is the latest improved strain of the popular Rocky Ford. It eliminates every defect of all other strains. Perfect in size, shape, netting, flavor, and long keeping and good shipping qualities. Our seed is pure. (Pkt. 10c) (oz. 25c) (1/4 lb. 75c) (lb. \$2.00) postpaid.

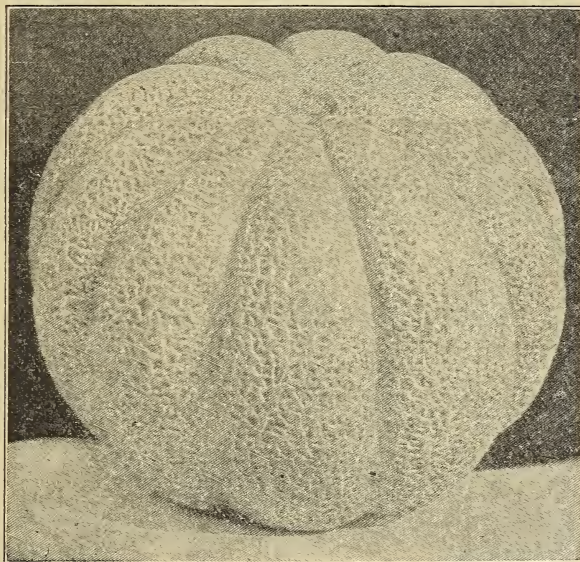
Our Gold Lined Netted Rock This is the Rocky Ford with the tinge of yellow around the seed cavity bred up to the highest state of perfection from the rust-resistant strain. The heavy netting forms a rind so hard that it will ship to the far Eastern markets with practically no deterioration. (Pkt. 10c) (oz. 25c) (1/4 lb. 75c) (lb. \$2.00) postpaid.



A & M Tip Top

A & M Tip Top This popular muskmelon is another Seed Company triumph for Aggeler and Musser because of our effort years ago to introduce it. The gardener was slow to accept it, but knowing its merits we persisted in offering it. It is now the most popular muskmelon grown for the local market. We have the right strain as you can see in the picture. The yellow flesh is edible to the rind. The melon is of medium size. Our seed is pure. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid

Yellow Fleshed Columbus To all external appearances it is like the green fleshed variety, but its cross with the Tip Top adds flavor to its good keeping qualities, making it a good market melon. Its heavy netting, thick yellow flesh of excellent flavor makes it a very desirable all round melon. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.



Irondequoit

Irondequoit This excellent melon originated in Irondequoit, New York; hence its name. It is as popular in New York City as the Tip-top is in Los Angeles. We sent to Irondequoit and purchased some pedigreed seed from the original introducer and now offer you the pure strain. This melon may well be called the Improved Tip-top, for that is what it is. The appearance is similar except the netting which is heavier; it is more solid and less prone to split. The average size is slightly larger; the flesh is yellow and the flavor unsurpassed. It is an ideal melon for the peddler or the cafeteria. It is neither too large nor too small. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid.

A & M Muskmelons—Continued

GREEN FLESH VARIETIES



The Original Gautier Pineapple

The Original Gautier Pineapple It is medium to large size, heavily netted, green fleshed with excellent flavor; solid and a good carrier.

We are now able to announce that we again have the true type and recommend it to melon growers that they may again get the Old Original Pineapple Muskmelon. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Whites Favorite—This muskmelon should become very popular. It will build up a roadside business as quickly as did Famous Indiana.

The flesh is white without fibre. It melts away like the flesh of the Hybrid Casaba and is as sweet. The rind is creamy yellow, scantily netted but with large ridges. No muskmelon is so prolific. It is ideal for the home garden or to grow for a roadside market. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.75) Postpaid.

Rocky Ford This is an improved Netted Gem, oblong, slightly ribbed, heavily netted, having green flesh of excellent flavor. A very early small melon. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

OLD FAVORITES

Some long time home garden favorite melons of which we have a limited supply; therefore, we offer in packets and ounces only. All are green fleshed varieties. Price for all varieties: (Pkt. 10c) (oz. 20c) postpaid.

California Beauty	Jenny Lind
California Giant	Miller's Cream
Columbus Green	Model
Large Hackensack	Champion Market
Los Angeles Market	Montreal Market

To Combat the Striped Beetle Of course the paper cap is the surest way, but the beetle does not like the odor of onions nor nasturtiums. If two or three onion sets or several seed of nasturtium is planted with the melon seed the beetle will keep away.

We have had a number of testimonials that this method is effective. We wish others to try it and report to us. If it is dependable, there may be other odorous plants that are repellent to other insects, just as leaves of the Umbrella tree are repellent to moth.

A & M Watermelons

Write United States Department of Agriculture, Bureau of Plant Industry, Washington, D. C. and ask for "Farmer's Bulletin No. 821," Watermelon Culture.

Culture.—Plant the seed in a furrow, dropping six seeds every eight or ten feet apart; cover about one inch. As the vines grow, hill the earth about them until the roots are from ten to twelve inches deep. When the vines are safely established, thin out, leaving only two vines to the hill. It is a good plan to establish your rows by throwing the soil toward the center, with two rounds of plowing, and cultivate every week during the early growth of the plants. This gives deep cultivation at the time it is needed, mulches the soil properly, makes proper rows slightly raised in the center, allowing a low place between for irrigating. Be sure to cultivate after each irrigation, as soon as the nature of the soil will permit. If these instructions are carefully followed you will have thrifty vines throughout the season.

FOR ALL KINDS OF MELONS

FOR APHIS—First keep the vines hardy by deep planting and proper cultivation. Irrigation and fertilizing. Then if the aphid appears, which is unlikely, spray with Black Leaf 40, or bury the affected part with dust. Either way is a constant fight. Lady bugs in some instances are destroying the aphid very satisfactorily.

FOR MELON BLIGHT that is caused by a fungus at the root, spray the hill freely with Bordeaux so that the liquid will follow the stem several inches beneath the surface. This should be done as a precaution rather than as a remedy.

READ THIS. If you would prolong the life of your vines, make a path between the rows by training the vines to grow along the rows and not across from one row to the other. Then at picking time do not allow the pickers to tread upon the vines. To do so makes many culls and shortens the life of the vines and lessens your profit about one-third.

For a good yield of melons grow a crop of *Melilotus indica* during the winter. Plow under during February; broadcast two sacks each of Toro Sulphur and lime. This is a guarantee against blight and will fertilize your field as nothing else will do.

"I planted your seed two years ago and I lost more than \$1000 on melons alone by not sending to you for my seed last year. Please enter my name on your mailing list.

"J. W. DANIEL, Texas."

ANGELENO

THE MELON FOR THE SHIPPER



A & M Black-seeded Angeleno

Black Seeded Angeleno This is another triumph for Aggeler and Musser Seed Company. The original Angeleno had white seed. The cafeteria managers said their trade required a black seeded melon because they knew that when the seed was black the melon was ripe.

We hybridized the Angeleno with Black Seeded Chillian and got the desired results the first season. It required but two years more to perfect the type. The flavor was also improved. It at once became a favorite with shippers.

As a shipper it is extraordinary because it rarely breaks, even supporting the weight of a man weighing 170 pounds. A carload will average in weight from 25 to 30 pounds to the melon. A larger acreage is planted to this variety in California than any other.

It is like the original Angeleno in shape and appearance except the stripe of the Chillian is sometimes apparent. (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.

A & M Watermelons—Continued

THE KLONDIKE

The Prince of all Watermelons
The melon that took first prize at the State Fair Sacramento
Also at the Los Angeles County Fair at Pomona



A & M Klondike

We first offered the Klondike watermelon in 1909.

It gained in popularity each year, first in one market then another. On account of the thin rind and extreme crispness the shipper was slow to accept it. But its extreme popularity impelled the shipper to grow it. Each year a larger acreage was planted, bringing greater profit to the grower. Last season brought the deciding factor. With an unfavorable growing season for melons and a glutted market, the fields of Klondike produced more and better melons and arrived at the market in better shape than any other variety and sold more readily at higher prices.

Although having a very thin rind it is a better shipper because it does not wilt.

When going through the market in early melon season, one need not ask which melons were shipped in and which were local grown. The evidence was pronounced in the wilted appearance of the melon. But not so with the Klondike which looked just as fresh as the local melon and tasted just as good.

We now feel that the Klondike has fairly won the title, "The Prince of all Watermelons."

It was discovered as a sport by Dr. George P. Clements, Secretary of the Agricultural Department of the Los Angeles Chamber of Commerce. It was introduced by us and we kept it pure to the original type.

The seed is small. One pound of Klondike will number as many seeds as two pounds of other varieties. The color of the seed is brown, mottled black. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

More About the Klondike

The fame of the Klondike has spread to other cities in California, and tourists have sent seed to other states from whence we receive the same expression of appreciation that we get in Los Angeles. Wherever it is grown it is the best melon, always selling at a higher price than other melons. If you would grow for your own table or for market you will make no mistake to plant Klondike.

"The Klondike watermelon seed that I bought from you produced the best watermelons that I have ever eaten, did not save any seed, as next season I wish to plant no other kind. They were not very large, the largest being about 30 lbs., but were certainly delicious."

ALEX S. HIDEELL, Puerto Vallarta, Jal., Mexico.

May 27th, 1922.

The field of Klondike Watermelons was absolutely uniform and the average weighed about 22 lbs.

A. & M. Seeds produce the earliest and best crops in Imperial Valley. Our Klondike Watermelon planted January 10 was shipped in car lots June 6th.

One plant matured twenty-one melons weighing 321 pounds. Average 15½ pounds. Sixteen of the melons would have averaged 20 pounds.

An Imperial Valley grower marketed 136 cars from 110 acres of Klondike watermelons. Better than 14 tons per acre.

Tom Watson has for several seasons been the most popular melon in the South. Its shape is similar to the Kleckley Sweet, but the color is a lighter green. Its great merit is in its earliness, good flavor, thin rind, and good keeping qualities, making it one of the best of shippers. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Kleckley Sweet This is an excellent melon either for the home garden or for shipping. It is of medium size, a very green rind, with deep red flesh of delicious flavor. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.

White Seeded Angeleno The most attractive in appearance of all watermelons—its large size, beautiful dark green rind with a tinge of gold showing through the green. No other variety compares with the Angeleno in its bright red flesh, red to the rind, and entirely free from fibre, simply melts. If the picker will observe the gold showing through the green as soon as it is ripe, he need never pick an unripe melon. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Important Notice.—Owing to the tendency of the seed of this melon to split open, we advise you to soak the seed in water for only a few hours. It soon closes and is ready to plant, and every seed will germinate, but if planted before soaking, the seed fills with dirt and decays. Please heed this notice.

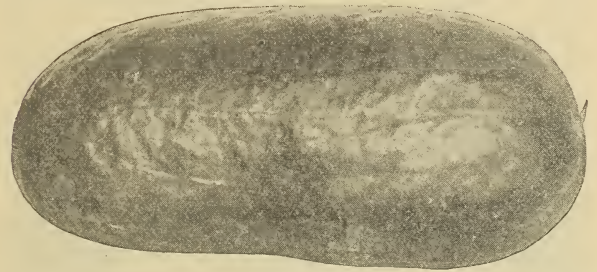
Chilian For twenty-five years the leading melon and is as popular today as at any time, and is likely to continue its popularity for many years to come. Its thin rind and delicious flavor commend it to the consumer, but its good shipping and selling qualities make it a favorite with the grower and dealer. It is very prolific and just a desirable size for the peddler to handle, and every melon is a good one.

White Seeded Chilian Preferred because of its large average size. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Red Seeded Chilian Preferred because of a sweet flavor peculiar to itself, and earliness. For dry farming we recommend this melon. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Black Seeded Chilian Preferred because of its earliness, short crop and black seed, which gives it preference at restaurants, hotels and cafeterias. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

All Chilians are good regardless of the color of the seed, but the Black Seeded one is planted for early crop.



Excel

Excel To the grower and shipper who wants a large melon the Excel fills the bill. It is oblong, dark green with a suspicion of a stripe, and will average 35 lbs. and is of excellent flavor. It is a good shipper and has maintained its popularity for many years. Our seed is from our own growing and is true to type. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

For Melon Wilt.—Pour a cup full of Bordeaux Mixture about the main stem so that the earth will be saturated and the liquid thoroughly applied to the stem. Here is the seat of the trouble, whether fungus or an insect, and the Bordeaux will prevent the cause. Butler Bros. of Lamanda Park complained to us that their vines were dying of wilt. We recommended this remedy which they at once applied only to the vines attacked, with the result that the vines revived, and in one night appeared to have made a new growth of six inches. They then applied it to the entire field and saved it for the season. But Mr. Butler says toward the close of the season it appeared again, and he believes the Bordeaux should be applied at least twice during the season.

Our Selected Melon Seed

Owing to our extensive trade with large melon growers and associations, we exercise every precaution possible to secure the best type of melons. Having the best seed obtainable we grow our melons under our own supervision. Our seed fields proved the wisdom of this method, for they showed the highest percent of perfect melons.

The fields are widely separated, so that there is no cross-pollination. The melons are to all appearances practically true to type. Our Superintendent understands his business and is conscientious, knowing the importance of his responsibility. I am sure this year's seed will maintain our record of high-standing among melon growers.

READ THIS

We are continually getting letters of inquiry for just such information as is given in this book. We are pleased to get the letters, but if the writers would first look to the subject of their inquiry, they would in many instances save themselves trouble and time.

A & M WATERMELONS—Continued

Irish Gray This new watermelon has the merit to become very popular as a shipper, also as a late melon. The introducer describes it as follows: "The color of the rind is yellowish gray, resembling a variety of Citron. It will keep in good condition for a long time after being taken from the vine, and stand long distance shipping better than any other melon. The flesh is bright, sparkling red, very sweet and firm. As a home market melon it is better than Kleckley Sweet and for distance shipping it is far better than Tom Watson; it will produce 25 per cent more good melons than Tom Watson under the same conditions and carry 1000 miles and back over the same route then open as good as a freshly picked Tom Watson. The rind will not sun-bake, the vines are most vigorous and wilt resistant." (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.



A Picture from our Field of Florida Favorite

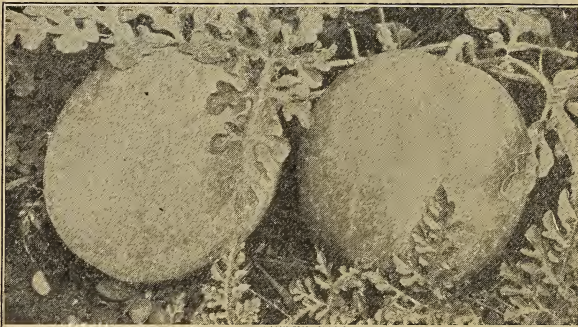
Florida Favorite This melon is very popular with shippers, because of its extreme earliness, and all round good qualities as a good shipper. In appearance it is similar to the Rattlesnake, the rind being considerably darker. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.

Peerless Also called Red-fleshed Ice Cream. This is the melon that proved so popular in Oregon and Idaho. It is early, a good shipper and a delicious melon. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Rattlesnake Has long been a popular melon with shippers. It is a long melon, having a white rind, with dark green stripes. Flesh of excellent flavor. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.

Yellow-Fleshed Ice Cream

This melon grows a very large size, is long in shape and the rind an even dark green. In quality it is simply delicious, sugary and of a rich flavor peculiar to itself. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.



A & M Winter Melon

Winter Melon This new melon is slowly but surely forcing itself into favor because of the many good qualities which are not apparent at first acquaintance. Like the Casaba which required 12 years to establish its reputation. The Winter Melon might easily be mistaken for a small white citron and the dealer must be convinced, then in turn must convert his customers to the knowledge that the Winter Melon is a thing of great luxury. It is late to mature; very light in color with a suspicion of a stripe; size 10 inches in diameter; seed small shiny black, flesh pink, solid and stringless. The flavor when cold is sweet, crisp and surprisingly delicious, and when you have finished you realize that you have eaten a melon as entirely distinct from a water melon, as the Casaba is apart from the Cantaloupe and just as delicious. Like the Casaba it should not be eaten right off the vine, but be allowed to lie around until the first signs of decay. It decays slowly like an apple, not like other watermelons. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

"The Winter Melon is a winner. They keep well and taste good."

CHRIS PASEIL, San Diego County.

"Your Winter Melon that we tried out last season proved a wonderfully fine melon in our climate; earlier by several days than any other melon planted, and fine keepers."

(Signed) "CORA A. WELLS.

CITRON



Large Green Striped Citron. Wt. 60 lbs.

Citron Large Green Striped

Weights from thirty to sixty pounds. Is better than pumpkin for stock. Allowed to lay in field or piled in the barnyard will not be damaged by frost nor decay until the following summer. (Pkt. 10c) (oz. 20c) (¼ lb. 35c) (lb. \$1.00) postpaid.

Preserving Citron Red Seeded, small round melon. This melon with a proper portion of lemon makes an excellent preserve that is as good as marmalade. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.

Some Letters from Pleased Customers

"The Davis perfect cucumber is certainly perfect. I planted ten varieties of onions. The Riverside Sweet Spanish excelled them all in size, production and goodness. No other onion for me hereafter.

The Estampes pumpkin is the best we have ever eaten.

The Orange County Prolific produced more and better corn than the Mexican June Corn.

The A. & M. First Early Tomatoes were first to bloom, first to ripen and first in the heart of my family.

I want a new catalog. I have worn mine out reading it. It is very instructive.

I will want twenty pounds of Sweet Spanish Onion Seed."

A. J. JOYCE, Ariz.

"Be sure to send me your new catalog. Your last one did me a great service. It is instructive and suggestive.

GEORGE TESTER.

"I borrowed your 1921 catalog from a neighbor. It contained such perfect directions that I want your seeds next year. Be sure to send me your new catalog because it is the most valuable one in publication."

MRS. HALLIE SHEARIN.

"Your Lime and Toro Sulphur have done wonders for our garden. We have never before had such a crop. I believe the vegetables cook quicker and taste better. Be sure to send me your new catalog. I think it is wonderful."

EMILIE BLACKLIDGE, Ala.

"Being limited to the smallest of town lots my seeds are not many in the gardening line but I do enjoy your catalog. There is so much information in it."

MRS. A. B. TORREY, Cal.

"My last year's seed from your house was excellent in quality. Your seed annual the best I get."

FRANK PLUMB, Fairfax, Mo.

"Please send me a 1922 catalog. I find your catalog a most helpful bulletin for ranch work."

CHAS. BOUNCE, Riverside Co., Cal.

"Please send me a new seed catalog. Gave mine to a friend. It is the best catalog I have ever seen, for the gardener or farmer."

G. A. PRICE, Cal.

"I would like very much to receive a copy of your catalog. It is without any exception the finest catalog I have ever seen as it gives so many helpful instructions."

MRS. J. W. SAYAN, Ariz.

Formula for Cutworm and Grasshopper Poison for Five Acres

Paris green (or white arsenic).....	1 lb.
Molasses (cheap blackstrap preferably).....	2 qts.
Lemons (or oranges).....	½ doz.
Water.....	4 gals.
Bran (or alfalfa meal).....	25 lbs.

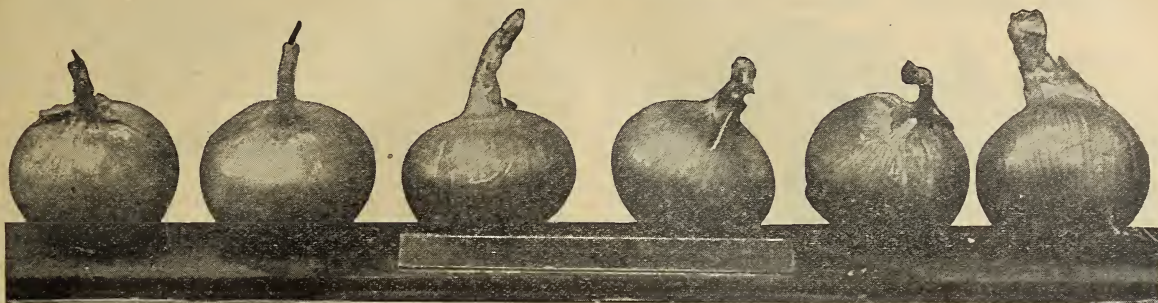
Grind lemons with meat grinder, mix all ingredients thoroughly. Spread thinly to avoid danger to livestock.

Best spread in late afternoon.

"I tried all spring and summer to grow cabbage plants, but the cutworms would destroy nearly all of them. In desperation I mixed up the formula given in your catalog. That got them; I have no more trouble. Thanks for the advice."

HARRY WATTAN.

A & M Onions



A & M Riverside Sweet Spanish. Six Onions, one yard.
Weight 16½ lbs.

Write
California Agricultural Experiment Station
Circular No. 199
"Onion Growing in California"
By Stanley S. Rodgers

Culture.—No crop is so liable to variations by cultivation and soil as the onion. Having rich soil with too much irrigation will produce thick-necked scallions, while the same soil, well drained, would produce the finest onions. A sandy loam well fertilized is best.

No vegetable is so sensitive to variations of climate as the onion. It is of utmost importance that the right variety is selected for each month in the year, and for your particular climatic conditions.

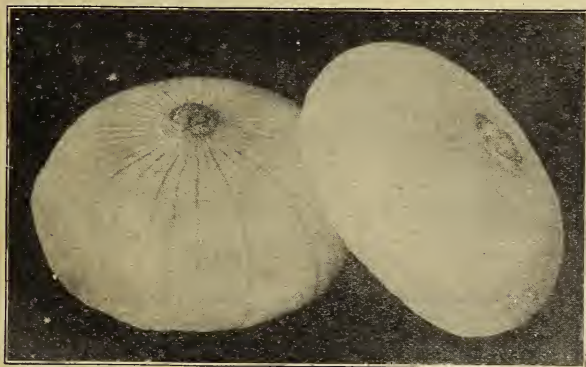
Irrigate in the furrow between the ridges to avoid flooding the onion, which causes the onion to rot readily, rendering it unfit to ship or to keep.

To succeed in growing onions it is highly important to make a proper selection of seed suitable to the time of planting. West of the Coast Range plant the Queen variety in August and September. They will then attain marketable size in March and April. East of the Coast Range, where the temperature is more uniform, as in Coachella and Imperial Valleys, plant the Crystal Wax or Bermuda onion in September. We advise planting all other varieties from October until April, selected according to the market in which they are to be sold, and the facilities for irrigating.

The White Australian should prove popular because of the good keeping qualities.

Three pounds of seed are required to plant one acre for dry mature onions. One ounce will plant one hundred feet of row. For bunching onions, plant one-fourth pound of seed to 100 feet of row.

We claim our onion seed to be the highest type as to germination and purity. When you wish to plant onions consult us as to when, how and what variety to plant. For early local trade plant New Queen.



Extra Early White Queen This is by far the earliest and best onion to grow in Southern California. Planted during August and September it attains marketable size in March and April and is sold on the local market as early as the Bermuda. Local growers market them while quite young, cutting the top off close to the onion. They harvest only what can be sold from day to day.

This practice is very profitable for the reason you are selling a green onion at the price of the early dry onion.

For three years we have been unable to obtain seed; on this account growers have used other varieties. But now that sufficient seed may be had we advise growers for local markets, it will add greatly to your profit to plant the Queen Onion next August and September. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

Large Onions are now the style. This has been brought about by the introduction of

The A & M Riverside Sweet Spanish

We have no sets of this variety

Very large, light yellow, globe shaped, small top, good shipper.

This Onion was brought from Spain several years ago. A small acreage was grown, the product of which was sold at the stores of Riverside, California. The unusual mildness and excellent flavor made this onion popular at once. A larger acreage was grown and the popularity broadened until the onion is in demand in Portland, Oregon, Chicago and as far east as Detroit, Michigan.

It is a good keeper and not prone to smut; we do not say it is immune, but the grower gives the following directions for curing and keeping this onion, and if followed there is little likelihood of smut.

Plant in December or January. It will mature in September when there is no danger from sun scald. Allow the onion to thoroughly mature until the tops have fallen and dried.

Then pull the onions and allow them to remain in the field in rows well covered with the tops, which after a week of favorable weather become as dry as chaff. The tops are then rubbed off and the onion put in crates and stacked loosely in a shaded but well ventilated place. After four to six weeks the onion is so thoroughly cured it may be safely shipped to any city within the United States.

It will be very profitable to the grower who will plant this onion.

To obtain the highest price, this variety should be planted about February 1st; they will then mature about August 1st, and if the prevailing price is too low put them in cold storage. (Pkt. 10c) (oz. 80c.) (¼ lb. \$2.65) (lb. \$8.00) postpaid.

Yellow Globe Danvers This onion is the standard winter sort in many markets. The shape is almost globe form and the bulbs are quite large with thin necks. The skin is a fine brown, orange yellow, while the flesh is pure white, solid and of good quality. Its earliness makes it valuable for market. The crop is very uniform and ripens at one time. (Per Pkt. 10c) (oz. 25c) (¼ lb. 80c) (lb. \$2.50)

Ohio Yellow Globe This onion is the standard winter sort in many markets. The shape is almost globe form and the bulbs are quite large with thin necks. The skin is yellow, while the flesh is pure white, solid and of good quality. Its earliness makes it valuable for market. The crop is very uniform and ripens at one time. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Red Wethersfield Probably the most popular red onion, and the one grown more largely throughout the United States than any other. It is a large medium flat onion of excellent mild flavor. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Australian Brown Quick to mature; a good keeper; solid and heavy; an excellent onion for shipping. The skin is a light brown. Its solidity gives it great weight and a sack weighs several pounds heavier than a sack of other varieties. The onions are thin-necked and ripen very early in all soils. As the plant makes a very quick growth it matures the bulbs before the hot, dry summer weather sets in, and this in connection with the exceptional keeping qualities makes it a most profitable variety. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

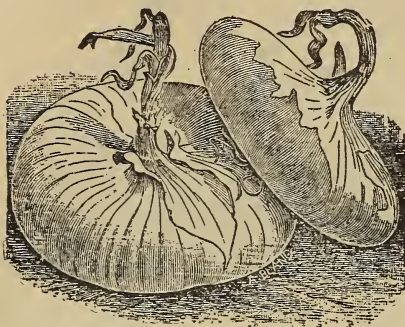
Read

Onion smut is quite a menace in some sections cutting the yield nearly in half.

Here is a good remedy: One pint of commercial Formaldehyde to 16 gallons of water; attach to your seeder a tank with a 5/16-inch hole. This will drop the required amount of mixture in the furrow with the seed. One gallon should be sufficient to apply to 180 feet of row.

A & M ONIONS—(Continued)

Crystal Wax and Yellow Bermuda



Crystal Wax Onion

These two varieties go hand in hand; they require the same climate and culture; where one thrives the other also thrives. They mature at the same time and bring about the same price on the market.

The Crystal Wax is a medium sized pure waxy white onion. The Yellow Bermuda is about the same size as the Crystal Wax, but a yellow straw color.

These are the varieties that are grown in Southern

Texas and in Coachella and Imperial Valleys to the exclusion of every other variety. Why? Because they are adapted to that climate; because when planted the latter part of September they mature in March and April, just when the market is bare and the price is highest. Onion growers are satisfied with 300 crates per acre, and 25% off color. Our seed produces 500 to 800 crates per acre, with less than 1% off color.

Crystal Wax (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

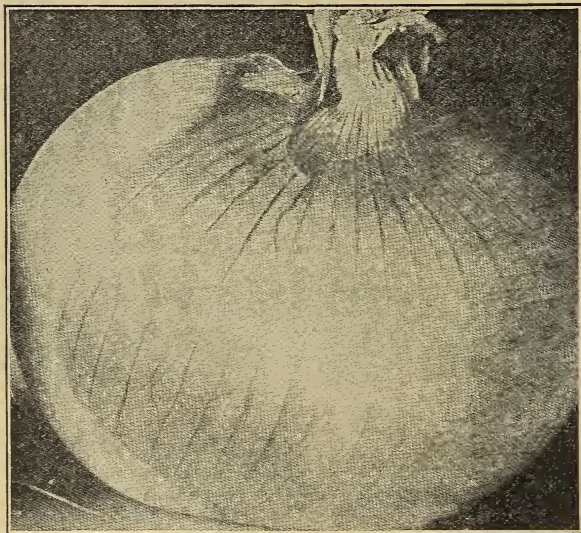
Yellow Bermuda (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

Red Bermuda In shape, like the White Bermuda, color a pale red.

Planted during January matures latter part of June. No other onion is ready for use so quickly after planting seed.

It is the right onion for the home garden. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

A Good Shipper



White Australian

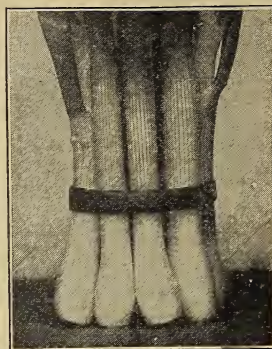
White Australian As compared with the Brown Australian—shape, the same; size, one-quarter larger; keeps as well; is earlier; color is nearly pure white.

Several years ago we had a quantity of this seed which was widely distributed. In New Mexico, Arizona, Texas, and in the San Fernando Valley, California; everywhere it was grown it attracted attention because of its superiority. At that time it was not yet true to type; the seed produced many odd colors, but notwithstanding this fact, the growers wanted it year after year. But we withdrew it until we could by selection produce a white onion true to type. Now after years of selection we offer you a pure White Australian Onion. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

White Portugal, or Silverskin A good second early white flat onion to follow the Extra Early White Queen. It should be planted any time from November 1st until April 1st. It is a good keeper and desired for shipping. It has long been a favorite, and probably no other variety is more generally popular with growers throughout the United States. Under good cultivation the average diameter is from four to six inches. The thick skin is a clear silvery white, flesh snow-white, sweet and tender. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Southport White Globe This onion now easily leads all other varieties in popularity on the Los Angeles market and is selling more readily and at higher prices. It is a good keeper, either in the field or in cold storage. It is a silvery white in color, globe shaped, and of delicious flavor. It is the popular onion with the shipper. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

Prizetaker A large Yellow Globe Onion of finest flavor, handsome shape and enormous size, many single onions having been raised to weigh three pounds or over. The Prizetaker grows always to a perfect globe shape with a bright straw color. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.



Bunching Onions

Bunching Onion

Many think any white onion will do for a bunching onion, but this is not true. Our growers for fancy trade have learned that we have the best strain of seed for this purpose, and our sales amount to thousands of lbs. each year. The picture shows a sample of what our seeds produce. They are just the right shape. (Pkt. 10c) (oz. 35c) (¼ lb. \$1.20) (lb. \$3.50) postpaid.

A & M Onion Sets

The earliest onions are grown from sets planted in September. This brings them in the market in February and March, when prices are highest. About 250 lbs. of sets will plant one acre.

We have sets only in two varieties. The White Portugal and the Yellow Globe Danver. Therefore state whether you wish white sets or yellow.

We have no sets of the Riverside Sweet Spanish.

For the home garden no vegetable is so valuable as the onion, and for this purpose it is better to plant sets, because they are ready for the table six weeks after planting. Set them three inches apart in rows six inches apart. When ready for use, take up every other one as needed, allowing the balance to grow to mature size. One pound of sets will plant about fifty feet of row. (Lb. 40c) postpaid) (10 lbs. \$3.50 postpaid). For larger quantities write for prices.

A & M GARLIC

Cultural Instructions from a Professional Grower—"I am of the opinion that it would take 250 lbs. to plant an acre of garlic. I make my rows two feet apart; make double rows, the garlic about four inches apart in the rows each way. I believe in good soil; I can raise between four or five tons per acre. Weeds must never grow in garlic, and it needs plenty of water regularly. If you leave it suffer either for water or cultivation it matures before good size. Garlic planted October 2nd, matured May 7th. The Large White Garlic planted the same time matured in June.

Market—The demand for garlic is limited but insistent and the price has a wide range, from 5c per lb. to 50c per lb. (Per lb. 40c) (10 lbs. \$3.50) postpaid.

Eat More Vegetables

Vegetables are the natural source of vitamins. Vegetables contain more of this life force than any other food. Vegetable food is pure food. Vegetables are healthful. Grow more vegetables. Eat more vegetables.

A & M Okra

A good and healthful vegetable for a summer crop.

Culture—Plant seed from April 1st until Aug. 15th. Plant six to ten inches apart in rows three feet apart. One ounce will plant one hundred feet of row

A. & M. Early Greenpod

We have for a long time endeavored to produce an okra that is earlier than the White Velvet, which has long been the popular market variety. We have succeeded by selection, in producing not only an earlier variety, but a much more tender and prolific okra, and have named it Aggeler & Musser's Early Greenpod.

It is just the thing for truckers in the Coachella and Imperial Valleys, because it matures in April, fully a month ahead of other varieties; bears continuously until late in the season.

The pods are three to four inches long, deep green in color, and when young are absolutely stringless.

Every early trucker should have this variety. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

White Velvet

On account of its attractive white color, good flavor and tender pods when quite young, it has long been a favorite variety. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.



White Velvet

Mammoth Long Pod We have greatly improved the original strain and now its productiveness is simply wonderful, the pods shooting out from the bottom of the stalk within three inches of the ground, and the whole plant is covered with them to the height of a man's head, five or six feet. Pods are an intense green in color, of unusual length, nine or ten inches, tender, and of good flavor. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

A & M Parsley

Culture—Same as lettuce.

Plain or Smooth-leaved This variety has a richer parsley flavor than the curled varieties and should be preferred for the home garden. It is not profitable to the market gardener for the reason that the curled variety will produce much more per acre. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Champion Moss Curled Extra dark. Leaves are crimped and curled, giving a most beautiful decorative appearance. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Extra Double Curled A good curled variety for garnishing. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Hamburg Turnip Rooted Fleishy vegetable roots for soups, etc. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

A NEWLY REVISED AGRICULTURAL BOOK

The book will contain 232 pages besides 23 pages of half-tone illustrations, will be bound in full cloth and will sell for \$2.50 per copy postpaid.

Orders now solicited and filled as soon as books come from the bindery.

THE FIFTH EDITION OF

California Vegetables

In Garden and Field

By PROFESSOR E. J. WICKSON, A.M.

A & M Parsnips



A & M
Parsnip

Our New French Parsnip

Just right for the market gardener. The picture shows the actual size at time of marketing. It grows slightly larger, but it attains this size in ninety days, which is a full month earlier than other varieties. It is crisp and succulent. It will at once supercede all other varieties because of its all-round desirability. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

A & M Devonshire

This Parsnip was recommended to us by our European growers. It is scarcely more than half as long as the Hollow Crown, but it is often three inches in diameter. Tender and has an excellent flavor. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

A & M Hollow Crown

This is the favorite home garden sort to grow in a very mellow soil because it frequently grows two feet long, is very tender and has a particularly good flavor. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

A & M Peanuts

If interested, Ask for Our Bulletin on Peanut Culture.

Write Department of Agriculture, Washington, D. C., ask for Farmers' Bulletin 1127

READ—The Peanut is too much neglected. Its various uses are of great economic value. Its value as a food is well known, but few ranchers realize its value as a soil renovator, adding humus and nitrogen. As hog food, there is nothing better. The straw is rich in food value and may be pastured green, cured as hay or ensilage, and the yield of hay is often from four to five tons per acre. It grows on soil that may be too sandy for other crops. Therefore, if you have sandy soil, make it valuable by planting peanuts.

MARKET—There are a number of factories making Peanut Butter and by-products. It is here you can always find a buyer.

Reclaim poor sandy soil with peanuts.

Give an application of lime 500 lbs. per acre, and Toro sulphur 200 lbs. per acre.

Virginia Improved This variety is much superior to the ordinary Peanut, yielding fewer imperfect pods and combining earliness, productiveness and size; yields on ordinary land about 40 sacks to the acre. (Lb. 40c) (10 lbs. \$3.50) postpaid, Write for quantity price.

Spanish Hulled This is the small Round Peanut used so largely in confectionery lines. One would suppose that on account of the small size it would be unprofitable to grow. But not so. Mr. Moore, residing on the Laguna Ranch, says it is more profitable to the grower than the Georgia because it is enormously prolific, and grows in a compact bunch on a small vine so that they may be stripped easily by pulling the entire stalk through the hand instead of picking one by one. This advantage, together with the ready sale at a higher price, makes the small Spanish Peanut more profitable than the Georgia. (Lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

A & M Garden Peas

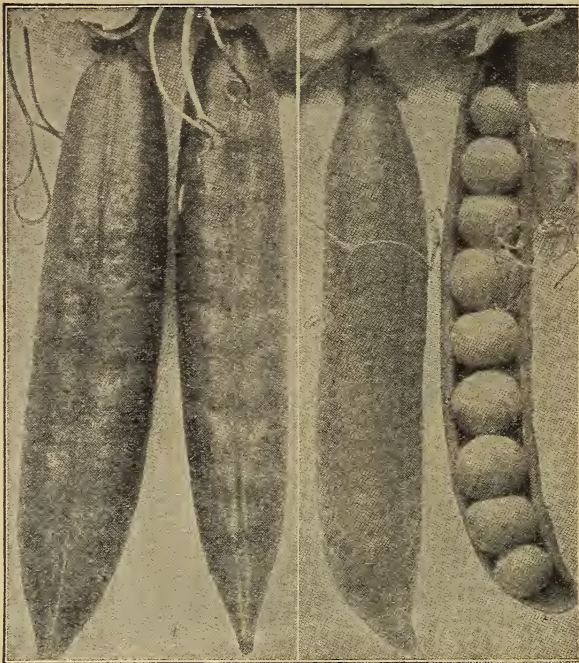
Write for quantity prices on all varieties.

Garden Peas Easy to Start and Grow

In planting garden peas in the home garden, first prepare the soil the same as for other crops, then scatter a little fertilizer where the row is to be planted, and rake this into the soil. Next stretch a line and make a deep mark with the corner of the hoe. The bottom of this mark should be at least two inches across so that the seed can be spread somewhat, and not crowded too closely together. Scatter the seed in this furrow, ten seeds to the foot, then cover about one inch deep and slightly firm the soil over the seed with the back of the hoe. About one week will generally elapse before the sprout appears above the ground.

At least three, and preferably four, plantings should be made at intervals of two weeks, in order to keep up a continuous supply.

There is nothing particularly difficult about the cultivation of peas—just keep them well hoed, and properly trained upon the brush or wire trellis, to keep them off the ground.



Dwarf Telephone

Admiral

ADVICE: For the home garden we recommend Nott's Excelsior, to be planted for very early peas, the A & M Perfections for later crop. Any other of the late varieties offered here are good.

Culture—Peas are very susceptible to soil and climate. Within the radius of a few miles of Los Angeles, and in one locality or another peas may be grown every month of the year. In a thermal zone plant peas from September 1st to February 1st, and in lowlands from January 1st to September 1st. In summer months, from May to September, plant two inches deep in heavy soil and deeper in sandy soil. From December to April plant not more than one inch deep. The object of this is to have the seed deep enough to lie in the moist earth, and shallow enough to get warmth from the sun. Never irrigate after planting peas until they come up. Irrigate before planting, but do not plant until the soil is tillable.

Peas will rot in soil that is too wet, especially during the winter months. They will stand a great deal of frost and cold weather until they bloom, but after they bloom a heavy frost will destroy the pods, and if cold enough, will kill the vines. Many planters sow one hundred pounds of seed per acre, but fifty pounds of seed per acre drilled in rows and well cultivated will produce larger pods and more peas per acre; besides, there will be less mildew. Put the rows north and south for winter planting to give them as much sun as possible.

At the first appearance of mildew spray with the best sulphur obtainable, and do the spraying in the morning. If your soil is sandy it would be well to inoculate the seed with Mulford Culture.

Stratagem A favorite in the San Francisco markets. The pods are of a dark green color and remain firm several days after picking. A very strong grower; very prolific, pods of good size and well filled. Vines stand upright about 2½ feet; an excellent variety.

Owing to the scarcity of the Dwarf Telephone for several years the Stratagem was established and it was then discovered to be a better shipper. Its dark green color made it a good seller in the Eastern markets.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

A & M Perfection Peas

During the past season this proved to be one of the most popular peas among market gardeners. The vines are vigorous and produce 25% more peas than the ordinary early varieties. Pods are large and well filled with tender, sweet peas of excellent flavor. May be planted during the winter months or early spring. What is good for the market gardener is certainly good for the home garden, therefore we recommend A & M Perfection for both. (Pkt. 10c) (½ lb. 25c) (lb. 40c) (10 lbs. \$3.50) prepaid.

Admiral or Senator

This excellent variety was introduced locally several years ago with only a limited quantity to offer. Every grower who was fortunate enough to get some was extremely pleased at his good fortune. Has dark green foliage, profusely branching vines bearing abundantly of large, well-filled pods of delicious sweet peas that mature in twelve weeks from planting. The picture is of pods grown on our trial grounds, and shows the shape and actual size of the pod. It has had two years' trial and every gardener that once grows it wants it again. That is the best recommendation.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Tall Telephone

Vines vigorous, growing about 4 feet high, with large, coarse, light-colored leaves and producing an abundance of very large pods filled with immense peas which are tender, sweet, and of excellent flavor. Throughout the south and by some growers in California it is preferred to all other varieties because of the hardness of the vines and its large, well-filled pods, making it one of the best varieties to grow during the winter months for shipping.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Little Marvel

It is indeed marvelous how prolific is this variety, two pods on every stem. The pods are three to four inches long, filled compactly. The peas are very sweet. Vines 13 inches. If you want an early prolific pea plant the Marvel.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Laxtonian

A long time English favorite. Any variety that can hold its popularity for so long a time must indeed be a good pea. For your home garden you can plant no better.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Telephone

Medium tall; pods very large; medium green peas, very sweet; a favorite with shippers probably because it carries well and commands a high price because of quality.

For years this variety was grown more extensively for shipping than any other.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Gradus

The largest of all extra early varieties; medium tall; quality superior to all other varieties.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Gray Sugar

(Edible pods.) Of extraordinary yielding qualities, and unsurpassed as an edible-pod variety.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Tall Gray Sugar

(Edible Pods) Every family garden should have a row of these delicious peas. Prepare and cook same as string beans. They are sweet and delicious. They yield enormously. (Pkt. 10c) (½ lb. 50c) postpaid.

Little Gem

Is a very desirable, extra early, dwarf, wrinkled variety, growing about 15 inches high. Very large, sweet, and of delicious flavor. (Per Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

American Wonder

The earliest of all wrinkled peas. Of dwarf habit, growing from 9 to 11 inches high, and producing a profusion of good-sized and well-filled pods of the finest flavor.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Nott's Excelsior

Although a few days later than the American Wonder, the pods will average fully one-third larger, containing 6 to 8 large peas, so closely packed together that they become flattened.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Yorkshire Hero

A very popular market pea in this section. Abundant cropper and excellent in quality. Height 2½ feet.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Notice all prices quoted on this page are prepaid.

GROW MORE PEAS

A & M Peppers

A & M PIMIENTO

Culture—For early green peppers, sow seed in hot beds in December and January. Transplant as soon as weather and soil in your locality will permit. For main crop sow seed in February, March and April, in hot bed. Pepper seeds need the heat of a hot bed to germinate it during these months. For fall and winter crop sow seed in out-door beds well prepared, during May and June. Winter crops can be grown in places that are entirely frostless.

All large growers are now planting seed in the fields and thinning out. This does away with the expensive and tedious method of raising plants and transplanting, and is proving satisfactory.

For field culture the plants are set eighteen inches apart in rows thirty inches apart. This would appear too close when the full grown plant covers the field solidly; but it is important to get the rows as close as possible in order to irrigate effectively.

Considering the enormous acreage to peppers of all varieties the value to the grower, manufacturer and retailer is above \$2,000,000, which is no small unit toward the aggregate wealth of Southern California.

Much credit is due Aggeler and Musser Seed Company for their part in improving these peppers that paved the way for this big business.

Improving the old California Chili as it was in 1895 into the large thick meated Anaheim Chili of today, was the first good thing we had accomplished in the way of improving vegetables. Our success in this was probably the forerunner of the many good things we have introduced.

The 1922 crop of Pimientos was estimated above 6,000 tons and more than 1,000 tons of dried Chilis.

Anaheim Chili Pepper

Anaheim Chili is desired above all others for culinary use because of its agreeable pungency. Other pungent varieties are intolerable, not so with the Anaheim Chili. That is what makes it the best seller in the market and the best pungent variety for canning. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

Next season we will offer a SMALL PIMIENTO

At the request of the Sylmar Packing Corporation we have perfected to the point of 100% purity, a small pimiento which they pack in small glass jars. The beautiful red peppers are stuffed with olives or avocado, and served as individual salads.

Ask your grocer for the Sylmar Pimiento Cup. No seed to offer this season.



The Pimiento as we imported it in 1906 The Pimiento as we improved it
Reduced to ½ size.



It is Now a Big Money Maker
"OUR SEED IS PURE." Owing to the large acreage planted to Chili, the Pimiento growers who planted seed of their own growing found their peppers badly hybridized with chili, resulting in a product that was ill-shaped and pungent, therefore could not be sold on the market nor to the canner. Our seed is pure and true to type, as one large grower testified by ordering his seed from us, discarding his own. He said: "I shall hereafter depend upon you for my seed, because it is the purest I have ever planted."

This pepper was introduced by us in 1911. It has become one of California's many staples, far out-ranking the Anaheim Chili as a canned product. This is because of its lack of pungency and its firm, thick fleshiness, which permits of its being scalded and peeled.

Every home garden should have a row of this Pimiento. For salad parboil it to remove the skin. Stuffed and baked it is far superior to all other peppers. (Pkt. 10c) (oz. 60c) (¼ lb. \$2.00) (lb. \$6.00) postpaid.

A & M Chinese Giant Bull Nose type, often growing to five inches in diameter. This is the variety grown so extensively in frostless sections for the winter trade, when the grower gets as much as 20 cents per pound for the green pepper. One grower claims that his returns from five acres was \$4,500.00. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.



A & M Chinese Giant Pepper

MARKET—For the market gardener the Chinese Giant is the big money-maker. There are instances—in the foot-hill sections where they can be grown throughout the winter—where the grower sold \$900 worth from one acre, but as a mid-summer crop it is profitable because of its enormous production.

Our field of Chinese Giant was just about 100% pure. Every plant and the peppers they bore were of uniform shape, some of them enormously large. They were growing on rich peat soil. Do not hesitate to place your order.

PEPPERS—(Continued)



A & M Ruby King



Floral Gem

Spanish Gem

A & M Perfect Ruby King Ordinarily they grow by three to four inches thick. Plant is of sturdy, bushy habit, and each one produces handsome fruit. This pepper is popular because of its solid, thick meat and mild flavor. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.

A & M Royal Pepper

This is an improvement over the Ruby King. While retaining the same delicious flavor of the sweet peppers, it is thicker meat, so much so that it may be canned as is the Pimiento. It is particularly desirable for the table as stuffed pepper, because of the delicious flavor, fleshiness and cup shape.

It is another of the new things that we tried out before recommending it to our trade.

To gardeners we say do not hesitate because a crate of Royal Peppers will weigh as much as a crate and a half of Chinese Giant. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.



The Royal

Floral Gem This beautiful yellow pepper became popular several years ago. It is 1½ inch in diameter, 1½ to 3 inches long, delightfully pungent with a flavor quite distinct from other peppers, and commands an independent price. The supply has not yet caught up with the ever-increasing demand. This pepper turns from green to a beautiful waxy yellow. When mature it is red. It is marketed when yellow. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.25) (lb. \$8.00) postpaid.

Spanish Gem Like the Floral Gem it is very pungent with a flavor that is desired for pickling. In size it will average from ¾ to 1 inch in diameter, and 1 inch to 1½ inches in length. It is marketed when quite yellow. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.25) (lb. \$8.00) postpaid.

Bell or Bull Nose Do not confuse this with the Chinese Giant. It is similar in shape but scarcely more than half as large. It is much more prolific and a very desirable variety for the home garden. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.

Small Chili This small pepper is ½ inch in diameter, and two to three inches long. Is very pungent and marketed when quite green, although it is also sold when it has become red. It is an old time favorite and finds a market with canners and at stores catering to the foreign trade. (Pkt. 10c) (oz. 80c) postpaid.

Cherry A very pungent pepper, round as a cherry, about one inch in diameter, marketed when green. Used largely in pickling and by the foreign trade. There is a profit to the person who will specialize on this and other small pungent peppers. (Pkt. 10c) (oz. 80c) postpaid.

Cayenne A long, slim pepper, rather pointed, and when ripe, a bright red color. Extremely pungent. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (lb. \$8.00) postpaid.

Mexican Chili

The Mexican Chili has out-classed the Anaheim Chili by many hundreds of acres. We were taught that people living in hot climates were fond of hot peppers, but it seems that it was only a local habit, and that climate had nothing to do with it. The North and East have acquired the habit, and our shippers are having difficulty getting growers to keep pace with the market.

If you have rich sandy loam with irrigation available, there is big money in growing Mexican Chilis.

The Mexican Chili is in a class by itself, on account of its extreme pungency. It is not canned, but is used almost exclusively for grinding and sold as cayenne, the trade of which is surprising. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

Our seed is pure and taken from selected peppers grown far from other varieties.

Mexican Chili
Big Money Maker**VEGETABLE PROBLEMS IN DIABETIC DIETS**

By W. A. ORTON, Sc.D.

United States Department of Agriculture,
Washington, D. C.

Mr. Orton, himself a victim of this disease was employed by the Department of Agriculture, for the purpose of determining what vegetables would benefit a diabetic or would at least do no harm.

The above is a title of a circular written by him.

The following advice is quoted: "Avoid potatoes, sweet potatoes, corn, peas, lima and other beans.

Eat—

Asparagus	Cauliflower	Endive	Parsley
Beets	Chicory	Kale	Parsnip
Cabbage	Collards	Kohlrabi	Pepper
Celeriac	Corn salad	Lettuce	Radish
Celery	Cress	Mustard	Salsify
Chard	Cucumber	Okra	Spinach
Chervil	Dandelion	Onion	Tomato
Carrots	Eggplant	Pai-tsai	Turnip
			Squash

A & M Potatoes

Write Department of Agriculture, Washington, D. C., for Bulletin No. 533, entitled "Seed Potatoes and How to Produce Them"

Essential Factors in Successful Potato Growing

Treat seed stock before cutting. The very best seed may have traces of one or more of the many diseases to which potatoes are subject. It is, therefore, advisable to soak seed potatoes in a solution which will kill whatever disease may be lurking on the outside of the tubers. Make this solution by dissolving four ounces of corrosive sublimate in about two quarts of hot water (be sure it is thoroughly dissolved) in a glass jar and then add to thirty gallons of cold water in wooden vessels. A barrel or wooden tank makes a good receptacle for this purpose. Place the sacks of potatoes in this solution and leave one and one-half hours, then drain, and, if the potatoes are not to be cut immediately spread out to dry. Use the same solution for only four or five lots, as the strength becomes weaker the more it is used. This solution is poisonous and should be handled with care and kept where animals may not drink it. Treated potatoes should also be kept away from stock.

Plant four to five inches deep, 14 inches apart, in rows 30 inches apart.

If potatoes follow alfalfa or Melilotus good yields can usually be obtained without the use of commercial fertilizer; but commercial fertilizer will be found profitable.

Keep soil moist at all times. Do not judge moisture by appearance of the potato plants as when the plants become a very dark green or begin to turn yellow it is then too late to apply water for best results; and potatoes are likely to become rough and knobby.

Turn earth up toward plants a little higher at each cultivation; until at last cultivation the ridges are six to ten inches high and broad at top so that tubers will be kept cool and free from tuber moth infection.

POTATO INSPECTION—All potatoes intended for seed purposes must be inspected by the County Horticultural authorities before they may be received and again before they may be shipped out. This is a great protection to the grower.



A Typical White Rose

THE VARIETIES WE OFFER

It will cost you nothing to consult us, and may save you from making costly mistakes.

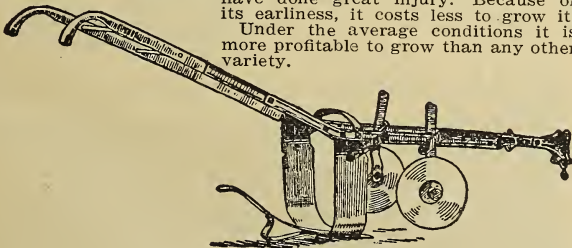
A & M SEED POTATOES Certificate of Quality

Our potatoes were grown for seed purposes. They are carefully re-sorted, are in good condition when shipped and are recommended by us. You can do no better than to plant our seed potatoes.

The White Rose We will have on hand throughout the planting season, clean selected seed of the popular varieties, but we recommend the White Rose for the reason that for twenty-five years it has proven more satisfactory than other varieties.

It is not particular as to soil. It matures quickly which makes it a good variety to grow without irrigation, besides it is out of the ground before nematode and other enemies have done great injury. Because of its earliness, it costs less to grow it.

Under the average conditions it is more profitable to grow than any other variety.



Perine's Sweet Potato Digger

"Have used the Perine's Sweet Potato Digger this season and find it to be a most wonderful machine; has decreased my cost of digging 75 per cent. Get all my potatoes and in excellent condition."

"Would be glad to have you refer anyone to me. Yours truly,
"J. E. SWIFT, Van Nuys, Calif."

"I could not get along without it."
"W. E. KIRKPATRICK."

British Queen Many growers have excellent results with this variety. They have a fairly heavy soil and find it more profitable to plant for a fall crop; it does not mature early enough for spring planting to get the higher price.

We also offer selected seed of the following varieties: Red Rose, Burbank and Triumph.

It will cost you nothing to consult us. We may save you Owing to the fluctuation of the market we cannot state price, but we request that when you are in the market for selected seed, write us stating the quantity you want.

It will cost you nothing to consult us. We may have you from some costly mistake.

What is U. S. Grade No. 1?

U. S. Grade No. 1—This grade shall consist of sound potatoes of similar varietal characteristics which are practically free from dirt or other foreign matter, frost injury, sunburn, second growth, growth cracks, cuts, scab, blight, soft rot and damage caused by disease, insects or mechanical or other means.

The diameter of the potatoes of the round varieties shall not be less than one and seven-eighths inches, and of potatoes of long varieties one and three-fourths inches.

In order to allow for variations incident to commercial grading and handling, five per cent by weight of any lot may be under the prescribed size, and in addition six per cent by weight of any such lot may be below the remaining requirements of this grade; not more than two per cent by weight of the entire lot may have the flesh injured by soft rot.

A Van Nuys planter advises planting the tuber four to five inches under the original level surface so that as the rows are hilled, the tubers are finally covered seven to ten inches deep. This system provides for tubers being formed far enough below the surface that they have plenty of moist soil on top and they are well protected from the tuber moth.

POTATO VAT

Treating Potatoes by Dipping Them in Corrosive Sublimate

Pursuant to our policy of doing everything to give our customers the best and cleanest seed possible we have installed a large vat in which all potato seed will be so treated, when requested, at a small additional charge, thereby insuring more and better Potatoes for Southern California.

Price for dipping seed is 35c per 100 lbs. up to one ton.

Price per ton is \$5.00.

A & M Pumpkin



Large Cheese or Kentucky Field

For stock only, plant Mammoth King, Estampes, Cushaw, Kentucky Field or Cheese, Sandwich Island, Iron Clad and Connecticut Field.

For the canneries, plant Estampes, Kentucky Field or Cheese.

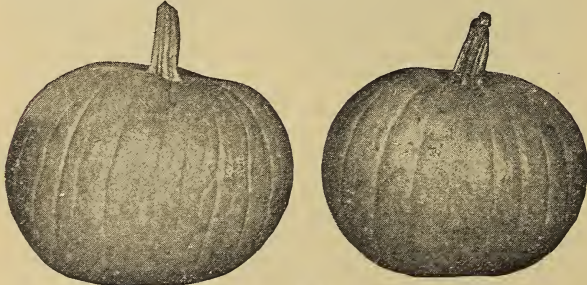
For the home, plant Boston Pie.

Culture—Pumpkins delight in rich, sandy soil that is perpetually moist—the soil that retains moisture by the dry farming method, because pumpkins do not want too much water, and to flood them would destroy them, so when irrigating make the furrows nearly as far from the hill as the tip of the vine, and when the vines intersect, run the water through the middle of the row. Plant the seeds every 8 or 10 feet, allowing only one plant to remain.

Kentucky Field or Large Cheese This variety is locally called Sweet Pumpkin, and is grown more than any other of its kind for stock, because it is a good keeper, notwithstanding it has a soft shell. It is fleshy and very sweet; also good for pie, and is largely used for canning. On one large ranch in the San Fernando Valley there was planted a large acreage to nearly all the popular varieties; this one was unaffected by the hot sun, and remained in perfect condition while other varieties were sun-burned and decayed quickly. (Pkt. 10c) (¼ lb. 35c) (lb. \$1.00) postpaid.

Estampes We have the purest stock seed from which to grow this pumpkin. It is the heaviest pumpkin for its size that we know of; 100 pounds is not an unusual size for them to attain. It is the canner's favorite because of its thick, deep red flesh and the fine sweet flavor. It is without exception the best for dairy stock, and only the scarcity of the seed has prevented it from being more widely known. (Pkt. 10c) (¼ lb. 50c) (lb. \$1.50) postpaid.

An Estampes Pumpkin, weighing 131 lbs., was grown on the ranch of Mr. Hathaway. His boys are active, intelligent farmers and dairymen, and give us the information that when they feed other pumpkins the cows eat them because they have to, and the milk contains only 3 per cent butterfat, but when they feed the Estampes, the cows are just crazy to get at them, and the milk contains 5 per cent butterfat. "Just to try it out, we again fed other pumpkins and the butterfat fell to 3 per cent."



Sugar, or Boston Pie

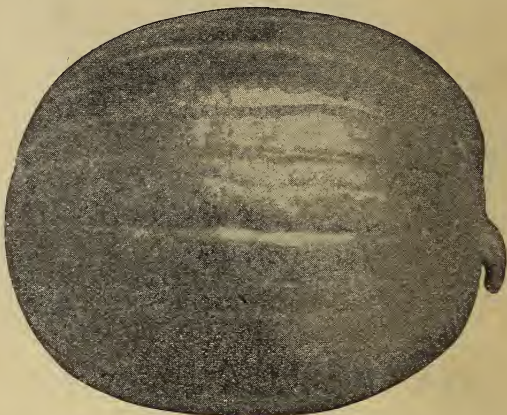
Sugar or Boston Pie A small handsome variety, and very popular. The skin is a deep orange yellow; flesh fine grained and sweet in taste. Famous in Boston as a pie pumpkin. It sells better on our local market than any other variety except the Jack o' Lantern at Hallowe'en time. (Pkt. 10c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Cushaw or Crookneck This excellent pumpkin ought to be planted more largely. There is more pumpkin for its size because of the small seed cavity. It is excellent for pies, and yields enormously. (Pkt. 10c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Sandwich Island The most popular pumpkin in Ventura County. It is as hardy as a citron. A good one to plant where water is scarce. (Pkt. 10c) (¼ lb. 35c) (lb. \$1.00) postpaid.

Mammoth King This is the large pumpkin so well known locally. As many as 20 tons have been taken from one acre. It not infrequently attains a weight of 200 pounds. (Pkt. 10c) (¼ lb. 45c) (lb. \$1.25) postpaid.

Japanese Pie (Green Cushaw) An excellent pumpkin for pies. The flesh is sweet and of a rich salmon color and free from fiber. It is very prolific; on this account it is profitable to grow for stock. (Pkt. 10c) (oz. 20c) (¼ lb. 35c) (lb. \$1.00) postpaid.



Connecticut Field (Jack-o'-Lantern)

Connecticut Field (The Jack-o'-Lantern)—This is the Hallowe'en and Thanksgiving trade, at which time they bring \$20.00 per ton, and two cents per pound at retail stores. Twenty tons to the acre is no unusual yield. If the land has been manured liberally a full crop can be grown among corn. It is a most excellent keeper, and will be sure wealth to all who grow and feed it liberally. (Pkt. 10c) (¼ lb. 45c) (lb. \$1.25) postpaid.

MONEY IN GROWING SQUASH AND PUMPKINS.—The canners consume enormous quantities. They use principally the Large Cheese pumpkins, paying about \$6.00 per ton. Next to the canners are the bakers, who use Hubbard Squash and Small Sugar, paying about \$20.00 per ton.

PLANT PUMPKINS AND CITRON FOR THE DAIRYMEN

If you have an idle space of rich sandy loam plant pumpkins any time from May 1st to August.

If you have any soil too sandy to grow the usual crops, plant the large green striped citron, you will be sure of a big crop.

See the managers of your nearest cannery. Secure a contract with them to grow pumpkins.

A Word About Seed Selection

Twenty-five years ago when little attention was given to building up to a standard type by seed selection and growing in isolated places, in order to avoid cross-pollination, we made one of our greatest achievements when we bred up and introduced the Anaheim Chili, which is now being canned and dried and prepared in many ways for commercial uses, giving employment to thousands.

What we have done with the Anaheim Chili has been repeated with many other vegetables, notably the Pimiento, White Rose Potato, Hybrid and Golden Beauty Casabas; indeed the popular standard vegetables and melons of the Southwest have been introduced by us. Probably the most valuable of all is the Los Angeles Market Lettuce.

A & M Radish

Culture—Seed may be sown the year 'round in California. Radishes thrive best in light, sandy loam, made rich with manure. Sow in drills 10 inches apart. An ounce of seed will sow a hundred feet of row, 10 pounds to the acre.

Early Scarlet Turnip

One of the earliest and best sorts for forcing; its color is very handsome; flavor very mild, crisp and juicy; stands a great amount of heat without becoming pithy. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

French Breakfast

A splendid variety, medium-sized, olive-shaped, very crisp and tender; of a beautiful scarlet color. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Chartiers A distinct, exceedingly handsome and attractive sort; color of top scarlet rose, shading into pure waxy white at the tip. Attains a large size before it becomes unfit for the table. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Early Long Scarlet

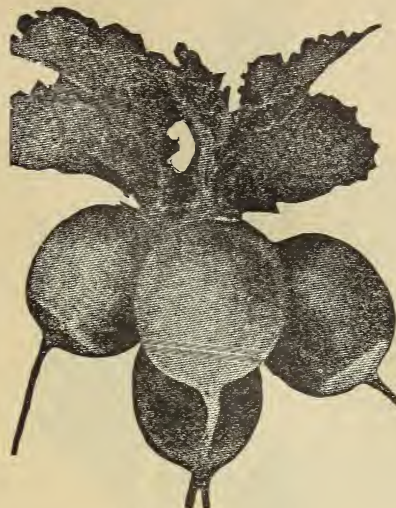
Very brittle and crisp; color a bright scarlet; small top. Six to eight inches long. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Large White Chinese

This is a winter radish of deliciously sweet flavor; can be eaten as a turnip as it is without stringency. The Chinamen use this variety exclusively. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Stump Rooted Half Long Scarlet

This variety should be more popular because it is just the right size for table use, not too large, never pithy, but always crisp and sweet. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.



Scarlet Turnip White Tip

Scarlet Turnip White Tip

An early variety of medium size and excellent flavor, and of a very handsome appearance. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Long White Icicle For the home garden we consider this a most excellent table variety. Its extreme earliness, beautiful pure white appearance, excellent flavor and crispness should make it a favorite everywhere. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Crimson Giant A variety extraordinary in that, while growing to an unusually large size, it is always tender, crisp and of mild flavor. It remains in perfect condition a remarkably long time, and unlike other forcing varieties, does not become pithy; root turnip shaped; color a beautiful crimson; flesh firm and crisp. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Japanese All Season

It is a very large, long, snow-white radish; deeply rooted, does not extend above the soil, hence it always is tender and crisp and has a delicious flavor. (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.

Japanese Winter A half-long white radish more adapted to our winter climate. It compares very favorably with our American varieties, besides it is much larger. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Japanese Summer

Its beautiful white color and mammoth size attracts great attention. It is very tender and the flavor is exceedingly mild. It attains perfection in California, growing twenty-six inches in length and three inches in diameter. It is a profitable radish to grow, as it sells readily. It is excellent cooked as a turnip. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

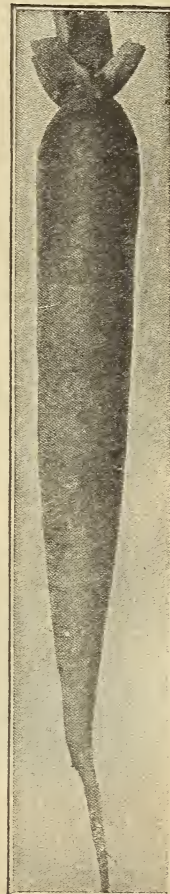
California Mammoth

Pure white; the flesh is tender, sweet and crisp, keeps well. Plant from September 1st to March. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

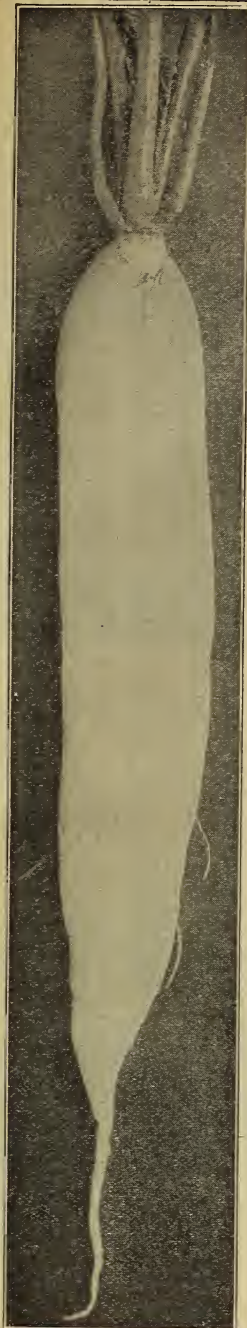
China Rose A delicious radish, crisp, with little tendency to become pithy. Skin is a beautiful deep scarlet and flesh pure white. It is a good seller and is in great demand by the vegetable peddlers. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.



All Season



Chartier



Long White Icicle



Radish intercropped with Beets or Turnips are marketed before there is any interference

A & M ROSELLE

Culture — Sow seed early in April in the field, four feet apart, in rows six feet apart. Cultivate as Okra. There is an early and a late Roselle. Be sure to get the early variety, because the frost is almost sure to destroy the late variety before it matures. We offer only the early variety.

It is an annual plant that has been sufficiently tested to indicate its great value and to warrant more extended cultivation. The calyx surrounding the seed pod is used as soon as the flower drops for making jelly and jam. The jelly is superior to guava or currant, and labeled as "Queensland Jelly," is shipped from Australia to all parts of Europe. It is easily grown from seed if planted after the ground is warm; grows rapidly, resists drouth and is very ornamental. Every home garden should have a row of this ornamental and useful plant. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) postpaid.

NOTE — Our local growers are not up with other localities in advertising and educating the public to the uses of Roselle. The local demand has never been fully supplied. Some one ought to get busy.

We have been advised by a lady from Texas, also one from Cuba, to remove the seed pod, and the jelly is thus greatly improved. The calyx is an excellent substitute for cranberry sauce or pie.

Having received numerous inquiries how to use Roselle, we have decided to insert the answer here. Pick the pods that grown at the axil of each leaf. Boil them until soft and strain through a cloth. Add ½ pint of sugar and the juice of ¼ of a lemon to each pint of juice, and boil again until it jells.

The pods are ready for use in September. We are advised that excellent jelly may be made from the leaves. Therefore it will not be necessary to wait for the pods to mature.

Put Roselle Pods in water to cover; let stand over night. In the morning strain, boil to one-half and put in cans; use when needed as lemon juice.

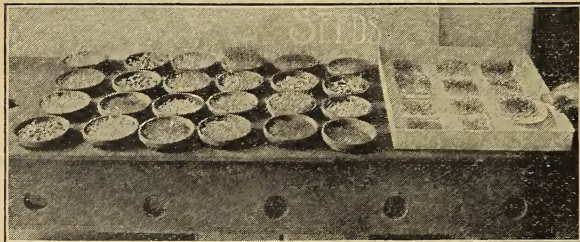
A & M SALSIFY

Culture—Sow the seed in the spring in drills one foot apart and one inch deep, thinning out plants to four inches. It succeeds best in light, well-enriched soil. One ounce of seed for 50 feet of drill.

Mammoth Sandwich Island A large and superior variety. Mild and delicately flavored. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

A & M SORREL

Broad Leaved This is boiled and served like spinach. It possesses a very fine flavor. As the hot sun tends to increase its acidity, a partial shade is advisable. It should be sown in drills 18 inches apart. It is hardy but the roots should be divided every four years. (Pkt. 10c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) postpaid.

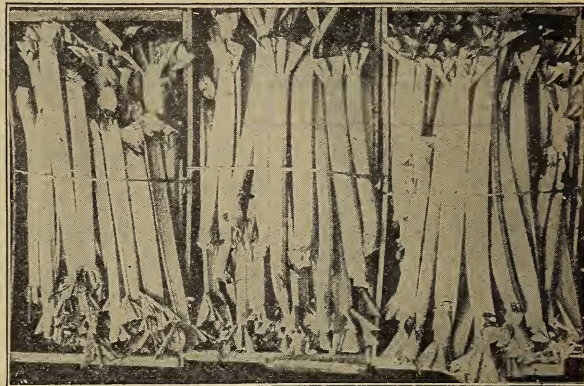


ANALYZING SEED. WHAT IT MEANS.

We have with us a seed analyzer whose sole duty is to analyze samples of seed in order to determine what varieties of weed seeds it contains and the number of each; also the per cent of inert matter in order to estimate what per cent of pure seed any certain lot contains, and what per cent of it will germinate.

A & M RHUBARB

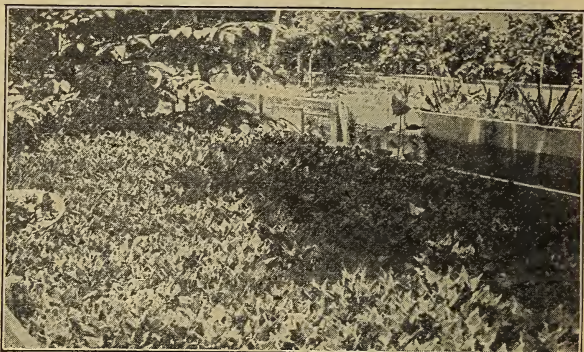
Culture—Sow the seed any time from February 1st until July 1st, in drills two feet apart, in order that you may cultivate with a horse cultivator. Within five months after sowing the seed, the Wagner's Giant variety will be large enough to market, even though the roots are not larger than your thumb. Transplant at any time when the roots are as large as a pencil. Rhubarb requires a rich sandy loam, well drained. Never flood the crown nor bury it with soil. Therefore plant it on ridges or on the sides of an irrigating ditch. In our hot climate partial shading is beneficial. If you can do so, plant it in an orchard, setting the roots three feet apart, but if in a sunny place, set the roots 18 inches apart, that the leaves of one plant will shade the crown of another.



Giant Crimson Winter Rhubarb in apple boxes, 18 inches long.

Giant Crimson Winter It is undoubtedly the most profitable variety we have yet offered. It is displayed at the market places in apple boxes, and the boxes are barely long enough to accommodate the large, thick stems that will average one-half pound each, often weighing more than a pound. It is remarkably early, bearing large stems within five months from planting the seed, and grows nearly the entire year. The stems are so tender that they do not need peeling. (Pkt. 10c) (oz. \$1.60) (¼ lb. \$5.00) (lb. \$16.00) postpaid.

A & M New Zealand Spinach



New Zealand Spinach Growing in a very shady spot. Try it.

Every home garden should have a bed of New Zealand Spinach in some shady place. Where it is exposed to the extreme heat of the sun it becomes tough and bitter, but when grown under trees or shaded by shrubbery it is tender and grows luxuriantly all summer.

This picture shows a bed of New Zealand Spinach growing under trees and also shaded by shrubbery. This bed was started about six years ago. It re-seeds itself abundantly. Pick off the tips frequently. The more it is picked the more it produces.

New Zealand A spreading vine with numerous branches. One plant will cover an area four feet in diameter. The tender tips may be cut every few days and cooked as spinach; it is just as good. One packet of seed is enough for a family garden. (Pkt. 10c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) postpaid.

Mountain Spinach Is quite distinct from the common varieties, but more productive. May be cut several times which makes it branch all the more. After several cuttings it will produce enormously of seed. The quality is excellent. Try it. Seed is limited, we offer it in packets only. One packet is sufficient for a family garden. (Pkt. 10c) postpaid.

Mountain Spinach is also called Orach.

A & M Spinach

Professor Rogers' article, entitled "Spinach Growing in California," may be obtained by writing to the University of California College of Agriculture, Berkeley.

MARKET.—On the local market there is a uniform demand throughout the year for home consumption, but during the winter months the shipper requires enormous quantities. The canners contract for large acreages each year.

Garden Culture.—Sow in drills, one foot apart, and for succession, every two weeks; select a shady spot; as it grows, thin out for use, keeping clean of weeds. It grows the year round in California. One ounce of seed for 100 feet of drill; 12 pounds to an acre. Field culture is the same as for lettuce but requires no thinning out. Better Spinach may be grown in the shade of an orchard.

The consumption of Spinach has increased enormously during the past few years. The amount shipped out of California to eastern markets amounts to several hundred carloads, and the canners have packed during 1922, 1,190,525 cases as compared with 434,000 cases in 1921.

Spinach is well adapted to a large area in California and may be grown wherever the conditions are favorable for the production of vegetables. The yield per acre varies from three to five tons, with an average production of four tons. (As much as 8 tons have been grown). When selling to the cannery the customary price is about \$25 per ton.

"Spinach is best adapted to a rich, light loam and is not a satisfactory crop to grow on soils of poor quality or those which will not retain moisture. The climate requirements of this crop are very exacting. The plants will stand without injury a relatively low degree of temperature, but are seriously injured by heat. Planting early in the fall and late in the spring should be avoided since the plants will not make a satisfactory growth during hot weather. When planted during the rainy season, provided the soil is of a sandy nature and is free from weeds so that it will not pack, this crop may require no cultivation. The crop is ready to harvest in six weeks to two months after planting.

A & M Summer Success For several years we have endeavored to secure a type of Spinach that would prove profitable to grow in summer time, and after several trials this one proved the greatest success. With moist, loamy or peat land the A & M Summer Success will grow leaves 14 inches long. The leaves are very meaty and crisp. It is the best summer Spinach, but it is also the best winter growing variety. (Pkt. 10c) (¼ lb. 25c) (lb. 75c) postpaid.



Bloomsdale—Viroflay

Viroflay This variety has become popular as an all-round Spinach. It is desired by the grower because it is harder than other varieties and will produce in tonnage per acre more than any of them.

The canner and shipper like it because of its large smooth leaves.

The consumer prefers it because it is exceedingly tender and of mild flavor. (Pkt. 10c) (¼ lb. 25c) (lb. 75c) postpaid.

Bloomsdale Large green thick crumpled leaves, grows luxuriantly, producing twelve to fifteen tons per acre. (Pkt. 10c) (¼ lb. 25c) (lb. 75c) postpaid.

Broad-Leaved Flanders Is one of the best varieties for all purposes, and excels others for summer planting. (Pkt. 10c) (¼ lb. 25c) (lb. 75c) postpaid.

Prickley Seeded Winter This variety thrives best in the coldest weather, and is the money-maker for the market gardener. Our seed is now American grown, and for several years has given entire satisfaction. The leaves are large, fleshy and very tender. (Pkt. 10c) (¼ lb. 25c) (lb. 75c) postpaid

A & M Squash

Winter Squash

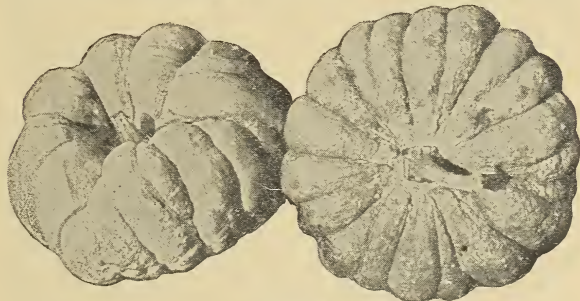
Culture.—Seed should not be planted until all danger of frost is past. In open ground plant in hills ten feet apart where irrigated, and fifteen feet apart where not irrigated. In orchard plant only one row between trees. When the vine is well along do not flood the hill, but keep the irrigation furrow nearly as far from the hill as the length of the vine. Keep in mind that the roots are longer than the vines.



Green Warted Hubbard

Green Warted Hubbard This variety is grown more largely throughout the United States than any other. It is used in many ways, but mostly for pies. It is a good keeper and because of its hard warty rind, it is the best of shippers. Therefore many acres are grown in Southern California for that purpose, and many more for the bakers, the canners and family consumption. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Fordhook Squash This is a most desirable squash for either summer or winter use. The vines are of strong, vigorous growth and wonderfully productive. Squash oblong in form, eight or ten inches in length, slightly ridged; smooth, thin, yellowish skin and of a yellowish color. If gathered young for cooking it is excellent, while if allowed to ripen on the vine they can be stored and will keep in good condition until late the following June. Either for baking like sweet potatoes or making pies during the winter, the squash is very fine. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.



Chirimen

Chirimen (Japanese Winter Squash) This Squash is very popular with the Japanese. Because of other good varieties the American seedsmen overlooked a good thing. This distinctly Japanese Squash is very sweet and of delicious flavor, making good pie with very little sugar. The color when ripe is brown. It keeps until quite late in the spring, even longer than the Hubbard. Every home garden should have a few hills of this squash. (Pkt. 10c) (oz. 25c) (¼ lb. 75c) (lb. \$2.00) postpaid.

Golden Hubbard The flesh is of a deep golden yellow—a much richer color than the Hubbard—fine grained, cooks very dry, and has excellent flavor. In its keeping qualities it is fully equal to the green variety. (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.

Pike's Peak An excellent winter squash. Fine grained and superior in flavor and keeping qualities to the Hubbard Squash, but not so well known. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

Boston Marrow Flesh, bright orange or rich salmon color; for sweetness and excellence is unsurpassed. (Pkt. 10c) (oz. 20c) (¼ lb. 45c) (lb. \$1.25) postpaid.

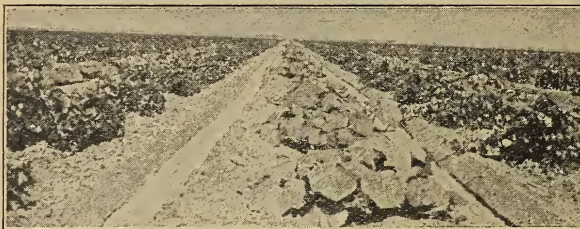
A & M WINTER SQUASH—Continued



A & M Blue Banana Squash

A & M Banana This squash grows from one to two feet in length. Flesh firm and solid, of beautiful orange-yellow and excellent quality. It keeps from one season until another. When quite young it is excellent to cook as a marrow. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

When we introduced this Squash about ten years ago we predicted it would soon supersede the Hubbard because of its smooth rind, its resistance to the heat of the sun, and because of its excellent flavor. A larger acreage is now planted to Banana than to Hubbard.



If you are starting a vineyard or an orchard, for one or two years you can more than make expenses growing Banana Squash.

English Cream Marrow It is as sweet as a sweet potato, and has none of that pumpkin flavor. It is good any way it comes on the table, and is better than Hubbard Squash for pie. It is 6 to 8 inches long and half as thick. Decidedly firm. It will keep from one season to another. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

NOTE—Owing to the low price of Hubbard Squash during the fall of 1921, there was a very small acreage planted last season with the result that Hubbard Squash was shipped in from Utah and sold at the wholesale market for \$40.00 per ton. Plant more Hubbards this season.

Here Are Some Causes for Crop Failures

SOIL—Not chemically or physically adapted to the requirements of the crop; not properly prepared; too much or too little moisture.

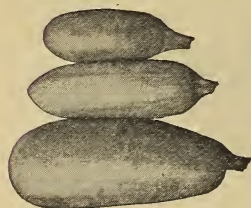
CLIMATE—Variety planted out of its season; unseasonable weather; extremes of heat and cold; excessive rain or drouth.

CULTURE—Variety not adapted to conditions; improper planting, improper cultivation, improper irrigation, improper fertilization; inattention to insects and diseases.

SEED—Unwise selection of variety; inattention to purity and germination; indifferent about pedigree and source.

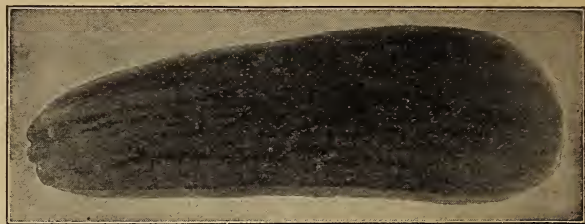
It is up to you to avoid or correct as far as is possible.

SUMMER SQUASH



Golden Summer Crookneck The popular well known Crookneck (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

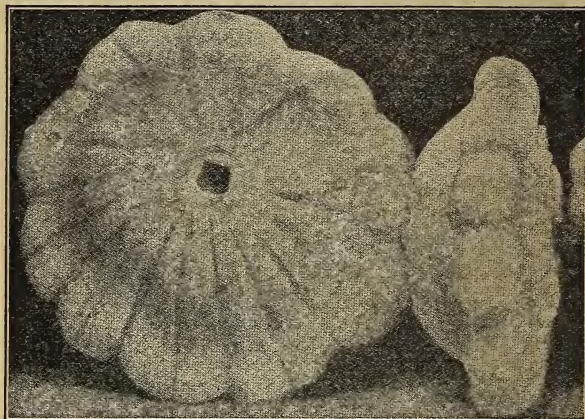
Zucchini The favorite Italian Squash. It should be eaten when quite young, four to six inches long. It is a delicious summer variety; do not hesitate to plant it. It is very prolific, a few hills will suffice to keep the family well supplied the entire summer. It is now more popular on the market than the White Bush Scallop. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$2.00) postpaid.



Cocozelle

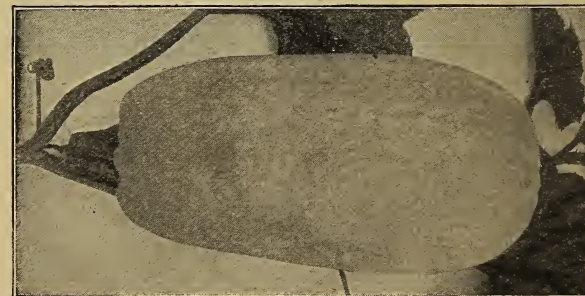
Cocozelle An excellent squash for many purposes. Equal to the White Bush Scallop for the table when taken quite young. It is enormously prolific. When gathered closely and fed to stock, the vines will keep bearing continuously all summer, and far into the fall. It survives drouth to a wonderful degree. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Italian Squash Is a bush variety, and should be planted 5 feet apart. It should be used when quite young. When served it has a rich creamy flavor not equalled by any other squash. Some gardeners have made considerable money making a specialty of it. For the family garden we would recommend its use instead of the small White Bush Scallop, because of its excellent flavor. Since our introduction of this squash a few years ago, it has now become one of the staple products on the market. It is listed with the daily market reports, and is grown largely by the gardeners in frostless sections for the early trade. (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.



A & M White Bush Scallop

A & M White Bush Scallop The well known summer squash that has been the standard for more than fifty years, and always in demand because of its earliness and it is delicious on the table whether stewed or fried as Egg Plant. (Pkt. 10c) (oz. 20c) (¼ lb. 40c) (lb. \$1.25) postpaid.



Long White Marrow

Long White Marrow This is exceedingly delicious as well as the most prolific of all English Marrows. Steamed when quite young or fried as egg plant it is equal to egg plant itself. The squash is about 12 inches long when mature, and has a light creamy color. It grows luxuriantly and bears abundantly all summer under very adverse conditions. It will grow, when continuously harvested, more food for hogs than pumpkins. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

Your 29th annual catalog is so full of information that I do not tire of looking at it. Be sure to send me your next.

ROY MORGAN, Cal.

A & M TOMATOES



A & M First Early
in the \$1,000,000 Class.

Culture.—Tomatoes do best on light warm, not over-rich soil, and success depends upon securing a rapid, vigorous and unchecked growth during the early part of the season. Sow in hot-beds from 6 to 8 weeks before they can be set out of doors, which is when danger from frost is past.

Transplant three to six feet apart in rows four to six feet apart, according to variety—three feet for those varieties of upright growth, as the Dwarf Champion, and six feet is not too far apart for vining varieties which soon cover the ground solidly. The soil should be plowed and pulverized to a depth of ten or twelve inches, the deeper the better. In order that the roots may keep in the cool earth, for as soon as the roots are heated by the hot, dry soil near the surface, the plant quickly sickens and dies, and the grower can see no cause for it.

In the early fall when the nights have become cool and heavy dews prevail, it would be well to spray with Bordeaux Mixture, to prevent blight. It may be necessary also to spray after each rain throughout the winter.

To prevent root-blight, pour a cupful of Bordeaux around the stem at the surface of the ground.

The time of planting and variety depend upon your local market, soil and climatic conditions, and the purpose for which they are grown.

On sandy loam soil near the foothills, where it is nearly frostless, we recommend planting seed of the A & M First Early in hot beds during December and January for winter and early spring tomatoes. Tomatoes that mature the latter part of April are considered early for Southern California.

Plant seed of the Stone and Greater Baltimore varieties during April, May, June and July, for the summer and fall crops, for canners and shippers.

For the home garden plant the HOME TOMATO and the Ponderosa.

A & M First Early for the early market. We introduced the A & M First Early in 1909, and from that time to the present it has superseded all other early varieties throughout Southern California, and is constantly growing in popularity here and elsewhere. For a first early money-maker, it has no equal in the tomato line. We cannot give it too much praise. The growers are not looking for an earlier one. It is good enough. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.75) (lb. \$5.00) postpaid.

Earliana The plants are quite hardy, with rather slender branches and moderate growth, well set with fruits, nearly all of which ripen very early in the season. The tomatoes are bright red and close together in clusters of five to eight; all of medium size, averaging 2½ inches in diameter. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

Bonnie Best Extra early, bright red, uniformly smooth, medium sized, solid and very prolific. It is very popular among growers of early tomatoes throughout the United States and wherever it has been tried. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

John Baer has exceeded every claim we made for it. It enabled the canners to begin two weeks earlier. Every tomato a smooth one. It is very prolific, every cluster bears four or five uniformly sized smooth tomatoes red from blossom to stem. We recommend it for heavy soils and for planting in young orchards. It has naturally a scant foliage suitable for early maturing, but will yield ton for ton with the Stone. For early market and early canning plant the John Baer. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.75) (lb. \$5.00) postpaid.

Chalk's Early Jewel Excellent early tomato for home use, smooth and desirable size. Its mild flavor makes it desirable as a salad. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

A & M TOMATOES—Continued



A & M Globe

A & M Globe This variety has become very popular with the large growers in old Mexico. They have learned that when it has turned from the green to a lighter color with just a suspicion of red it is in prime condition to ship to the farthest market with the least deterioration. It is nearly as round as a globe, produces abundantly and is a delightful table variety, almost without acidity, and is now considered the best shipper for the farthest market. (Pkt. 10c) (oz. 45c) (¼ lb. \$1.50) (lb. \$4.50) postpaid.

The Early Shipper It is very prolific, medium to large size, and red all over. It is very profitable to the early shipper. It is equal to the Stone for canning and has a better flavor. If you are growing for the early market, do not hesitate to plant it. (Pkt. 25c) (oz. \$1.50) (¼ lb. \$5.00) (lb. \$15.00).

Dwarf Stone (Tree Tomato)—Large, red, smooth and solid. The stalk is upright with dense foliage protecting the fruit from the heat of the sun. It is a desirable tomato to grow in the interior valleys. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

San Jose Canner This variety is a favorite with canners for the sole reason of its enormous yield of large tomatoes regardless of shape. We recommend it where tonnage is desired above all else. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

A & M Improved Stone The Most Popular Tomato

FOR MARKET NEAR AND FAR—THE TOMATO FOR SHIPPING AND CANNING

A & M Improved Stone This is the most popular tomato in Southern California. Several thousand acres are planted to this variety exclusively for shipping to Eastern points after other tomatoes have been destroyed by frost. For this purpose the seed is planted about June 15th, and the tomato brought to full size about October 1st, after which it gradually ripens as wanted for shipping. The tomato is of good size, bright red, solid, smooth, and enormously productive.

The canners prefer it because of its uniformly desirable size and solidity for canning. The grower prefers it because of the vigorous growth and large production extending throughout the season far into the winter months. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

The Boulder We have named this the Boulder because it is solid and smooth as the Stone Tomato, but much larger. It is very prolific. See the picture of a cluster taken from our field. It is too large for the shipper, but every housewife wants a large smooth mild tomato for salad. (Pkt. 10c) (oz. 65c) (¼ lb. \$2.20) (lb. \$6.50) postpaid.

June Pink The most popular extra early tomato grown in the South and East. It is very prolific and may be compared with the A & M First Early except its pink color. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (½ lb. \$2.25) (lb. \$4.00) postpaid.

Dwarf Champion (Tree Tomato)—Has long been a favorite midsummer tomato. Pink in color, smooth and solid, making it a good shipping variety. This has proven very satisfactory in Arizona. Its dense foliage protects the fruit from sunburning. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

Ponderosa A very large, purple tomato with few seeds and of excellent flavor. Our strain is round and smooth—not the usual oblong wrinkled kind. Favorite for the home garden. (Pkt. 10c) (oz. 65c) (¼ lb. \$2.20) (lb. \$6.50) postpaid.

Dwarf Ponderosa A large tomato on a small vine; just the thing for a small garden. The tomato is delicious. (Pkt. 10c) (oz. 75c) postpaid.

Golden Ponderosa A very large yellow tomato having a delicious flavor. It is ideal for salads and with a little finely sliced lemon makes excellent preserves. It yields enormously. We recommend it for the home garden. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.50) (lb. \$7.50) postpaid.

The Home This tomato when trellised to shade a window or to cover an unsightly corner will grow 12 feet high and as wide, bearing early and late pink tomatoes of good average size and unsurpassed flavor. It is an ideal home tomato and is also ideal to grow in the south for winter shipping, where a pink tomato is preferred. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.20) postpaid.

The Home Tomato Growing in Maryland

Sirs: I am growing your "Home Tomato" this season and it is the finest quality of any tomato I have grown in twenty years; very prolific and nice large fruit of beautiful color and uniform in shape.

JOHN H. GRIFFITH, Ruxton, Baltimore, Md.

Sept. 5, 1918.

Yellow Pear For pickling and preserving. (Pkt. 10c) (oz. 75c) postpaid.

Ground Cherry Grows like a tomato; fruits like a tomato, but the small fruit is enveloped with a husk. It is good for preserves. (Pkt. 10c) (oz. 75c) postpaid.

Genuine Italian Red Pear Shaped Used largely puree, preserving and spicing. (Pkt. 10c) (oz. 75c) postpaid.

Tomato-Leaf Blight Losses May be Avoided By Spraying with Fungi-Bordo

"I wouldn't grow tomatoes in a blight-infested region without spraying," says S. L. Dodd, jr., extension pathologist for the United States Department of Agriculture and West Virginia Agricultural Experiment Station, who sprayed tomatoes for the control of blight in six counties of West Virginia in 1918. Thorough spraying was the keynote of his success. He made six, and in some fields seven applications, using spray mixture at the rate of 150 gallons an acre for mature plants. Spraying improved color and solidity of fruit, reduced rot and sunscald, and increased the yield of ripe fruit 39 per cent and of both green and ripe fruit 55 per cent.

Small Sprayer Effective

A small knapsack compressed-air sprayer was used in this work. Such sprayers are light, easy to operate, and produce a fine misty spray.

To reduce the work of preparing spray mixtures, the following stock solutions were made: Five pounds of copper sulphate (blue stone) were dissolved by suspending it in a wooden vessel containing 5 gallons of water. Five pounds of stone lime (quicklime) were slacked in another vessel by slowly adding water at first and later increasing the volume to 5 gallons. Three pounds of resin fish oil soap were diluted in a third vessel by stirring it in hot water until thin and increasing the volume to 5 gallons by adding water of ordinary temperature.

These stock solutions keep indefinitely if not mixed or weakened by rain, but the lime should be kept covered with water to prevent drying out. The level of the liquid when freshly made and after each spray period should be marked on each vessel, and water added when needed to restore loss by evaporation.

Ten gallons of spray mixture are prepared by taking 1 gallon of each freshly prepared ingredient. Mix and dilute with water to ten gallons.

Picking and Hauling the Fruit.—Pick carefully and watch your pickers.

Do not disturb the vines any more than can be helped. Impress that upon your pickers.

The early planting is done in sheltered places along the foothills and along the coast, also in Coachella and Imperial Valleys. This crop matures during April and May and is shipped to all parts of the United States.

The Mid-Summer crop is set out at any time from April 1st until August 15th. This comprises the large acreage planted throughout the southwest for local consumption and for the numerous canneries. We have no figures as to acreage planted for this purpose, but it is enormous.

September and October are the months for planting Tomatoes for mid-winter consumption. Usually the local market absorbs the entire crop.

Our advice is that it is profitable to grow Mid-Summer Tomatoes for the canneries at a satisfactory contract price. It is too much of a gamble to grow a large acreage for the open market.

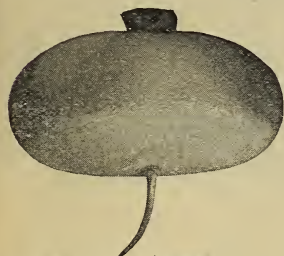
It is profitable to plant as late as August 1st in foothill sections.

Your crop is then likely to be in its prime when the colder locations will have been destroyed by frost.

This too is about the time when the demand comes from the East.

A & M Turnips

Culture—Turnips may be sown broadcast on damp sandy soil or in drills as beets and carrots. Drill in double rows on ridges not too thick in the row. The Purple Top Globe variety is now leading in popularity because of its mild flavor and its adaptability to our summer climate.



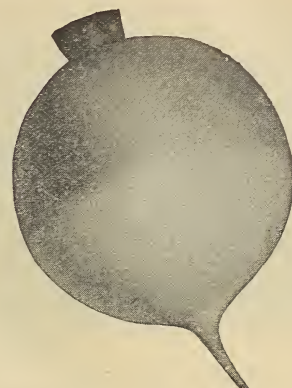
Purple Top Strapleaf



White Flat Dutch



Snowball



Purple Top Globe

Early Purple Top Strap-Leaf A very popular variety for either family or market use; large size, white, purple above ground; flesh fine grained. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Golden Ball A rapid grower of excellent flavor; bright yellow color; good keeper and a superior table variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Early White Flat Dutch An early white-fleshed strap-leaved variety; for quick growth, mild flavor and excellent quality. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Purple Top Globe Solid, very sweet, slow to get pithy. The very best variety for the summer season. Indeed, the best for any season, but slower to mature than the Strap-Leaf. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Snowball Next to the Purple-Top Globe in popularity, and excellent flavor. It is slow to get pithy in the summer, but always crisp during the winter. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Purple-Top Rutabaga The best of the Swede Turnips. Very hardy and productive; flesh yellow, is very solid, sweet and well flavored. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

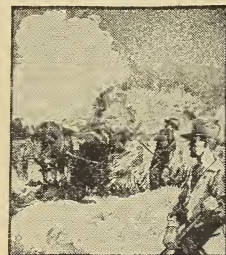
UDO

UDO (Japanese Salad Plant)—Three years ago the Department of Agriculture, Washington, D. C., sent us some seed of Udo which we planted in our demonstration garden. Each year it grew taller; the last season it grew 12 feet tall and matured a quantity of seed. The culture is the same as for Asparagus but, like Whitlook Chicory or Celery, it should be blanched by throwing the earth over the growing plants. It may be cooked and served like Asparagus or sliced and served with dressing as a salad. (Pkt. 25c) postpaid.



Inoculate Your
Alfalfa, Clovers, Cow Peas, Soy Beans, Vetches
and
Other Legume Crops
WITH
Mulford Cultures
FOR LEGUMES

Small Cost Large Returns Easy to Use No Labor Expense



MULFORD CULTURES FOR LEGUMES

Inoculation is no longer an experiment in California. Progressive farmers of the Golden West have demonstrated to their entire satisfaction that legumes offer the best known means of maintaining soil fertility, and rejuvenating over-cropped and worn-out fields, and they have also demonstrated that inoculation of legumes with nitrogen-fixing bacteria induces prompt "catch" and increases the yield of field and orchard crops. Realizing the importance of this branch of agriculture and wishing to have first hand information for our customers, we have made a careful study of this subject during the past few years, and have gathered worth-while information that may be had for the asking. Also we will send free upon request a descriptive folder on "Mulford Cultures" which we can conscientiously recommend for inoculating your seeds. Mulford Cultures contain pure, tested strains of active, vigorous nitrogen-fixing bacteria which are scientifically prepared and tested by experts in the biological laboratories of H. K. Mulford Co. This company enjoys a wonderful reputation for thoroughness and care in preparing their cultures, which we have found to be worthy of the usual A & M recommendation.

Mulford Cultures are low priced for the reason that we do not have the added expense of making house-to-house calls to sell it. It sells itself because California farmers know that it is an honest culture at an honest price.

Always specify on your order what crop you want to inoculate as there is a different strain of bacterial for each legume. For large acreage, order at least ten days before you require the culture.



Alfalfa
Sweet Clover
Melilotus Indica
Burr Clover
Cow Peas
Field Peas
Peanuts
Vetch
Sweet Peas
Garden Peas
Garden Beans
Lima Beans

Mulford Cultures are supplied for the varieties of legumes listed, at the following prices:

5-acre size\$5.00
("Dollar per Acre")
1-acre size\$1.50
1/4-acre size75c
Small size (supplied only in 4 varieties for Garden Peas, Garden Beans, Lima Beans and Sweet Peas35c

Soil Renovators for Winter Crop

Inoculate with Mulford Culture



Melilotus alba
See Forage Plants

Melilotus alba

For information concerning Melilotus alba (Sweet Clover) write United States Department of Agriculture, Washington, D. C., for Farmers' Bulletins Nos. 797 and 820.

Melilotus alba I have come to the conclusion that, except on sandy soils, it is better to broadcast the seed than to drill it. This is especially true where there is alkali. Sweet-clover seed should be very close to the surface. A light harrowing or dragging with a light brush drag, will mix the seed with the soil sufficiently for germination. It is better, too, to sow the seed in the fall and let the rains bring it up. It gets a better start that way.

Melilotus alba is being recognized more and more each season as a valuable soil renovator. Because of its large and extensive root system penetrating deep into hard subsoil, there decaying, permits moisture to enter and break up the hardpan that plowing may become deeper and more thorough. These roots have gathered nitrogen and add much humus, all of which is essential to building up new or run-down soil.

Melilotus has other uses in soil renovating; it will grow in alkali soil and reclaim it. It will eradicate Bermuda and Johnson grasses; therefore, if you have any land that will be benefited by Melilotus alba by all means plant it. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

Vetch For many years was considered the best legume for planting in orchards during the rainy season. It is only because Melilotus indica is a little harder that vetch now holds second place for that purpose; but science has discovered a new use for vetch. It is true that oats have long been planted together with vetch for the purpose of supporting the vetch that it may be easy to harvest. Now the new discovery is that vetch may be planted with oats, wheat, rye and barley in order that the grain will be fertilized by the nitrogen gathered at the roots of the vetch, thus greatly increasing your crop of grain, or if grown for hay it doubles the yield. Twenty to thirty pounds of grain sown with twenty pounds of vetch per acre, will yield more and better hay than sixty pounds of grain per acre if sown by itself. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Burr Clover The native Clover, and one of the best nitrogen-gathering crops and very satisfactory for orchards. There is an increasing demand for Burr Clover and the seed is very scarce and hard to obtain. It is the very best cover crop for poor or dry land, as it needs but little moisture. If your grazing land lacks native grasses, plant Burr Clover; it re-seeds itself, starting to grow with the first rain, and continues growing far into the dry season. (Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

Canadian Field Pea When it is too late to plant vetch or Melilotus plant Canadian Peas.

They may be planted in January and yet be plowed under in time for planting a summer crop. If your summer crop, like melons and potatoes are not harvested until November plant Canadian Peas.

Neither is the Canadian Pea inferior to other cover crops when planted at the right time. The right time is from September until February and on any kind of soil.

Notice—Do not plant just before a rain nor irrigate before they are well above the ground and established. If the soil is too wet after planting the seed will rot. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Lime and Sulphur for Clover

Both Lime and Sulphur will be found on pages devoted to insecticides and fertilizers. We have also classed the two together as soil builders because Science has only recently discovered that Sulphur is fertilizer, and it also destroys the microscopic germs of both Fungi and insects. Also that Sulphur and Lime together generate a gas that is highly beneficial to Clovers. We recommend that the two be applied to the soil at the same time. One sack sulphur and 300 lbs. lime per acre.



Melilotus indica in a young orchard

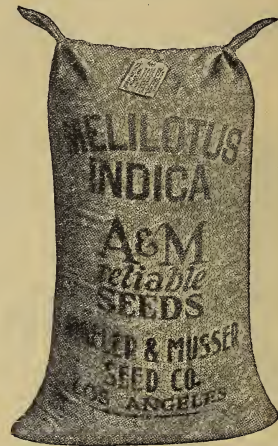
Melilotus indica

For information concerning Melilotus indica, write University of California, College of Agriculture, Berkeley, Cal., for Circular 136.

Melilotus indica Was introduced by us in 1909, has now become recognized as the legume best adapted for green manuring in the orchards of California. because it may be planted late in the fall after all crops have been harvested, will grow all winter with only the season's rainfall.

It prevents erosion during the rainy season, is easily plowed under, is richer as a fertilizer and if allowed to stand until July will prevent much of the June drop.

Melilotus indica is the best legume with which to build up your soil during the rainy season for the summer crop to follow, particularly potatoes and melons.



A tag on every bag says: "Approximate Purity 99.35%; approximate germination 92"

Hubam Clover and Purple Vetch

Two new cover crops for early spring planting to prevent the June drop, as well as soil builders.

Purple Vetch Write the Dept. of Agriculture, Washington, D. C., and ask for Farmers' Bulletin No. 967. Purple Vetch gives promise of being a valuable addition to the list of nitrogen crops that can be grown where the temperature does not fall below fifteen degrees. Because of its rapid growth in the fall it is adapted to green manuring in citrus groves where it will be appreciated as of special value.

Let us quote Mr. Robert W. Hodgson, Agricultural Extension Service, Los Angeles County, as appeared in the Farm Tractor, August 20, 1922: "Dr. H. J. Webber, Professor of Subtropical Horticulture and director of the Citrus experiment Station at Riverside announced that splendid results had been secured at the experiment station by using Purple Vetch, Hubam Clover, Sweet Clover and Soy Beans planted in February. The most promising of all was the Purple Vetch followed closely by the Soy Bean and Hubam Clover."

According to this statement, Purple Vetch leads as a cover crop for spring planting. It may be that Vetch may be better under certain conditions and that Hubam may be better under other conditions. The experiments have not yet determined that. (Per lb. 30c) (10 lbs. \$2.50) prepaid. Write for quantity price.

HUBAM CLOVER

(ANNUAL SWEET CLOVER)

What is it good for? Chiefly for green manuring or a cover crop in citrus groves, or for hay, or bee pasture. It makes the finest kind of pasture for stock.

How long does it take to make a crop? From four to five months will produce seed.

Where will it grow? It is not particular as to soil, but it does require lime and should be inoculated.

How should it be planted? Broadcast or sown four pounds per acre in rows 18 inches apart.



Hubam Clover on Mr. T. J. Walker's place.

AGGELER & MUSSER SEED CO.—

My experiment this season with Hubam clover makes me enthusiastic about its possibilities as a spring and summer cover crop. I believe it is the crop we have been looking for to plant in Valencia orchards. My experimental plot, planted March first, was nearly waist high by the end of June, in spite of a late cold spring.

I intend this season to make one planting in February, to be turned under after the "June drop" is over, and another planting in July to be turned under in the late fall.

Very truly yours,

ETHELBERT JOHNSON.

Mr. T. J. Walker of San Fernando has given Hubam its first commercial test in California, having planted it in eighteen acres of young lemons. April 13, 1922, using $2\frac{1}{2}$ to 3 lbs. of seed per acre. The results were wonderful. During June and July the ground was completely covered and on August 1st the clover in many places stood seven feet tall. (See the picture.) It makes twice the growth in one short season than any other form of clover. It is suitable for hay or green manure and provides more feed for bees than any other single crop. In less than one hundred days it will spread over an acre of ground equivalent to ten to twelve tons of good stable manure, all hauled and delivered. We think its greatest value will be found as a manurial crop. The greatest needs of our soils are lime, phosphorus and organic matter. Hubam clover will be the best interpreter for the lime and phosphorus and will supply more organic matter grown between two regular farm crops than any other plant."—Rural New Yorker.

Hubam as a Bee Pasture

When Mr. A. I. Root stood looking at Mr. Walker's field of Hubam Clover, a massive profusion of bloom, thick with bees, busy gathering honey; he remarked, "I verily believe that this plant will do more to make this land flowing with milk and honey than any other plant in the whole world." (Per lb. 75c) (10 lbs. \$6.50) prepaid. Write for quantity price.

Mr. J. B. Mather of Van Nuys is a successful potato grower, he is also a cover crop enthusiast. He grows but one crop of potatoes per year, always following a cover crop of Mellilot Indica, which he plants at the rate of 20 pounds per acre in the following manner:

After plowing and leveling his land he broadcasts 10 pounds of seed, then furrows the land and broadcasts another 10 pounds and turns in the water. By this method the furrows are seeded as well as the ridges and a perfect stand is obtained.

He states that several years ago without cover crop his average yield of potatoes was 70 sacks to the acre, and that with his first crop he increased the yield to 230 sacks, increasing his yield 160 sacks at a cost of \$1.20 per acre for cover crop.

You will note that had he planted two crops of potatoes his yield would not have been more than 140 sacks, so that he has produced more potatoes in one crop than he could have produced in two without the use of Indica, and has eliminated the cost of planting and harvesting one crop of potatoes.

He states that the average cost per acre of producing potatoes is \$100.00 F. O. B. cars, and that his average yield over a number of years with cover has been 200 sacks per acre.

Only once has he failed and that time he planted his potatoes too soon after the cover crop was turned under. The decayed Indica heated the soil and he got a poor stand because of the seed rotting. He states that land should lay 15 to 30 days after plowing under before potatoes are planted.

Soil Renovators For Summer Growing



Whip-Poor-Will Cow Peas in a citrus grove. Time, Aug. 1st.

Whip-poor-Will Cow Pea For more than twenty-five years the Whip-Poor-Will has been the standard summer crop for green manuring not only here but throughout the South. Why? (See picture.)

(1) It will grow on practically all kinds of soils, whether sandy or clay, poor or fertile.

(2) It is of the easiest culture.

(3) It has a big, strong, deep-root system, well supplied with large nitrogen gathering nodules.

(4) It revels in summer heat, and is extremely drought-resistant.

(5) It grows very rapidly, shading the soil from excessive heat, and leaving no room for noxious weeds.

(6) It greatly benefits the succeeding crop by accumulation of nitrogen in the soil.

(7) It leaves the soil in fine physical condition for the fall planting of grain or other winter crop.

(8) It produces an abundance of highly nutritious pods and leaves in a few months.

(9) It may be made into hay or ensilage, or pastured, the seeds may be used for stock feed or human consumption.

We have tried out many varieties of the cow peas which give such wonderful results in the south. The result of our trial is that we will discontinue offering those which showed decided antagonism to our climate. We are sure the Whip-Poor-Will is the best; it is entirely satisfactory for all purposes. Why, then, should we offer other varieties. Whip-Poor-Will is the best and has proven so since we first offered it in 1898.

Plant any time from April 1st until September 1st. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Brabham Cow Pea It has only recently been determined definitely that the Brabham is resistant to nematode. This discovery places the Brabham foremost as a desirable summer crop for green manuring. Few districts are free from nematode and while other crops nursed it thus spreading it over wider territory, the Brabham will discourage its development and if repeatedly planted may eradicate it from the field in which the Brabham is grown.

Under the light of the discovery that the Brabham pea is resistant to the nematode, to plant it would seem the wiser thing to do. (Per lb. 25c) (10 lbs. \$2.00) prepaid. Write for quantity price.

Soy Bean The Soy Bean is being more generally used as its merits become known. The importation of the Soy Bean from the Orient makes it unprofitable to grow for commercial beans or for seed but for early spring planting, for June cover crop and for green manuring it is very valuable and under certain conditions of soil may be preferred to clover or vetch. It is harder than the cow pea and on that account may be planted earlier. It is valuable to grow in young vineyards either to be plowed under or for green feed for dairy cows. (Per lb. 25c) (10 lbs. \$2.00) prepaid. Write for quantity price.



A field of Soy Beans grown near Artesia

Broad Windsor Bean Sometimes called Horse Beans, grows upright on a single stem bearing a profusion of large, well-filled pods. The roots are enormously productive of nitrogen. It will withstand 28° temperature; therefore, may be planted as late as September for best results as a winter cover crop. (lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Soil Renovators for Summer Growing—Continued.

PEANUTS



Growing Peanuts in a young Orange Orchard is to get your fertilizer for nothing. Harvest the peanuts and plow under the vines. It will meet expenses while the crop is growing. The Georgia Improved Variety is the best for this purpose. (Per lb. 30c) (10 lbs. \$2.50) prepaid. Write for quantity price.

SOIL BUILDERS

How Science Benefits Agriculture

Your Soil Fertility Will be Improved by Proper Crop Rotation
"The sowing of nitrogen gathering plants for green manuring has become so popular because of the excellent results obtained and because of its cheapness as a fertilizer that its use is almost universal; not only for orchards, but for fields particularly where melons and potatoes are to be planted.

"If your land is sloping, you need a cover crop to prevent eroding during the rainy season.

"If your land is lumpy and dry, lacking life, it needs humus and nitrogen.

"If your soil is sandy and fails to retain moisture, it lacks humus and nitrogen.

"If your soil is of clay and bakes and crusts readily, it needs humus and nitrogen."

The best nitrogen gathering crops for fall planting are Winter Vetch, Canadian Peas, Melilotus and Broad Windsor Beans.

For spring planting there is nothing better than Whip-poor-will Cowpeas. The best time to plow under is when the plant has about finished blooming.

The seed should be inoculated with Mulford Culture for best results from legumes.

Plant Cover Crops for Best Results

Which will you do—Buy manure or raise cover crops? Here is the comparison:

	Nitrogen	Acid	Potash
A ton of vetch (dry) contains.....	55.6	16.2	53.6
A ton of clover (dry) contains.....	45.8	9.4	31.6
A ton of manure (dry) contains.....	9.8	5.2	9.6

Bulletin No. 190, U. S. Dept. of Agriculture, says:

"A green manure crop should be a legume wherever possible, in order to obtain the addition of nitrogen to the soil. It is also necessary that a good growth be made, in order that we have a large quantity of organic matter to turn under and incorporate with the soil. Along with good growth should be a heavy development of nodules on the roots, as this is believed to indicate great ability to fix atmospheric nitrogen."

A WORD ABOUT PRICE

Occasionally someone tells us they "can buy for less." This we do not doubt, but it is not cheaper.

We are professional seedsmen. What seeds we do not grow we buy from professional seed growers who have and must maintain a reputation for reliability.

We have at great cost installed at our warehouse expensive machinery and other equipment for cleaning and testing our seeds in order that our patrons will have pure and reliable seeds that mean so much in net profit to the grower. In order to handle our business we are at great expense putting seeds into millions of packets and packages of convenient sizes. In order that no errors occur we must have high class intelligent employees and an army of them to keep proper records and make no mistakes with the labels.

Consider the seeds you buy from us that have been intelligently selected, cleaned and hand-picked, tested for germination and purity, treated and fumigated when necessary to destroy diseases and insects, and compare them with seeds that are not selected, cleaned and tested and note if low priced seed is cheaper.

Seed of low germination, and seed that contains dirt means a poor stand and small crop.

Pay the higher price, the best is the cheapest.

We cannot compete with lower prices of unreliable seed.

A & M Alfalfa

INOCULATE WITH MULFORD CULTURE
SEND FOR OUR ALFALFA BULLETIN, ITS FREE

Chilean or Common This variety has proven so entirely satisfactory to everyone for more than forty years that nothing better was looked for, and is indeed now so thoroughly satisfactory that many will hesitate to believe that any variety of alfalfa can be better, therefore we have an ample supply of Chilean seed.

Write to the University Farm, Davis, Cal., and ask for their latest reports concerning Hairy Peruvian alfalfa as compared with the Chilean or Common Alfalfa, or write us for our Alfalfa bulletin.

The experiments at the farm show clearly the shorter life of Hairy Peruvian under similar conditions. It will start earlier in the Spring and continue to grow later in the Fall, but the Chilean will produce more hay throughout the summer.

The quality of the hay of the Hairy Peruvian is coarser and becomes quite woody and is much inferior to hay of the Chilean alfalfa.

There is a greater demand for Chilean Alfalfa hay than for other varieties, it being a superior dairy feed. Furthermore it brings a higher price on the market which, of course, is an exceedingly strong point in favor of planting your acreage to the Chilean variety.

We have often been asked where the seed which we sell was grown, some being under the impression that Alfalfa seed produced in particular sections is preferable, but we have found, through careful investigation, that such is not the case and no certain section is favored in producing superior seed.

If the stock is of high germination, free from noxious weed seeds, and true to name, that is all that need concern the buyer.

(Per lb. 40c) (10 lbs. \$3.50) postpaid. Write for quantity price.

Hairy Peruvian We first offered this variety in 1918. It is harder and it does produce more hay the first year than common alfalfa, but it does not endure as well. Many large growers now prefer the common alfalfa. With these comments we offer the Hairy Peruvian Alfalfa to those who may have had better results and yet prefer it. (Per lb. 40c) (10 lbs. \$3.50) postpaid. Write for quantity price.

Maintaining Alfalfa by Bacteria

Editor Farm and Tractor Section:

The farmers of Orange county say: "Yes we can get a fine stand of alfalfa, but in three years the grass and weeds have taken it." Why is this?

In Mr. Corcoran's excellent letter in the Farm and Tractor Section of February 13, he says: "A good, even, vigorous stand of alfalfa goes a long way toward keeping out Bermuda grass." Now we of Orange county can get the stand; why is it not maintained "good and vigorous?" There are in various localities of the world "good and vigorous" alfalfa fields, ten, twenty, thirty and even fifty years old. Why not here, where some claim we have the best soil on earth?

May it not be true that the answer to this vital question is hinted at in Mr. Corcoran's closing paragraph concerning bacteria inoculation?

Bulletin No. 308 issued by the Wisconsin University, referring to a field inoculated with pure culture alfalfa bacteria, says: "In the early stages of growth, weeds are a menace. After the crop becomes well established it in turn becomes a menace to nearly all bad weeds. Inoculated alfalfa may add more than 100 pounds of nitrogen to an acre of soil each year, besides that removed in the crop. * * * Manure and lime, with inoculation, yielded 2500 pounds of alfalfa an acre. Manure and lime, with no inoculation, yielded 1,180 pounds of alfalfa an acre."

Cornell Extension Bulletin, June, 1916, says: "Alfalfa is dependent for its successful growth on the presence of nodules, as well as on a limed soil, and in most parts of New York State inoculation is absolutely essential. * * * Various men who have used the pure cultures have become so enthusiastic over the results obtained that they have written in, saying that they will never plant legumes without practicing inoculation."

A Virginia Bulletin, No. 207, page 10, says: "Many failures in growing alfalfa may be attributed to lack of inoculation."

Wherever we find successful old fields of alfalfa, if the roots are carefully dug up and examined the supply of bacteria nodules will be found to correspond to the vigor and quality of the plant."

Alfalfa Lucerne. This may well be called the King of nearly every state in the Union and it is essential to the best interests of every rancher, small or large. To the "Little Lander" with a few chickens and rabbits, as well as to the large rancher with hundreds of cattle, horses and hogs. It may be cut and fed green; judicious grazing does not injure it. If mixed with sorghum in the silo, it improves the ensilage, and as dry hay it is unexcelled. It is leguminous and, therefore, a soil renovator.

Cultivation is very simple, the essentials being well drained soil, good grading, thorough subsoiling, thorough watering and judicious harrowing; also proper fertilizer, especially on new ground.

Nurse Crop with Alfalfa

As a rule on sandy lands that are subject to blowing, or on heavy lands which have a tendency to bake, a nurse crop may be of benefit as it reduces blowing or baking. Unless the soil is subject to blowing or baking it is not advisable as a general rule to use a nurse crop. Under dry land conditions a nurse crop should never be used, as the moisture supply is too limited.

JAMES MARSHALL, Colorado Agricultural College.

A & M CLOVER FOR HAY OR PASTURE SWEET CLOVER FOR FORAGE

Melilotus alba This is a valuable addition to the farm as a forage crop. When quite young, it may be pastured or cut and cured for hay. This should be done just before the bloom appears. It is harder than alfalfa, more drouth-resistant, and better for renovating the soil. It may be cut twice the first season and three or four times the second season, yielding 2500 to 3000 pounds of hay each cutting. It is as easy as alfalfa to eradicate, is biennial. On account of its hardness to resist extreme cold, heat and drouth it is grown largely for pasture. It is highly recommended by the Department of Agriculture. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quality price.

21 Reasons for Planting Melilotus alba

1. It is not a weed.
 2. Like alfalfa, it is rich in protein.
 3. Will not bloat cattle or sheep.
 4. Equal to alfalfa for pasture.
 5. Is a great milk producer.
 6. Furnishes early spring pasture.
 7. Contains more protein than red clover.
 8. Fits well in the crop rotation.
 9. Is a great soil enriching crop.
 10. Better than any of the common clovers as a green manure crop.
 11. Is a valuable plant for honey bees.
 12. Prepares the soil for alfalfa.
 13. Roots are soft and give no trouble in plowing.
 14. Roots being tender become inoculated more readily than alfalfa.
 15. Never damages cultivated crop.
 16. Its roots decay rapidly, adding much nitrogen and humus to the soil.
 17. Grows and will produce a crop in all parts of the United States.
 18. Seeds freely in both humid and dry sections.
 19. Sweet clover prevents erosion.
 20. Will grow under conditions where clover and alfalfa fail:
 - (a) On land too low, too wet or too alkaline for alfalfa.
 - (b) On land too hard and compact for alfalfa.
 - (c) On soil too poor for alfalfa, especially where there is lime.
 21. It is immune to nematodes.
- Now read again these twenty-one reasons for planting Melilotus Alba, and see wherein it suits your particular case.

A Few Don'ts

- Don't plow deep.
- Don't sow deep.
- Don't cut low in mowing—at least 6 inches high.
- Don't have subsoil loose.
- Don't be afraid to sow sweet clover.

Red Clover (Common) This clover is quite familiar to the rancher from the eastern states where it is to the dairyman what our alfalfa is here.

It is harder than alfalfa, therefore we recommend it for higher altitudes or farther north than the San Joaquin Valley where it will not be subject to the hot dry atmosphere of the interior valleys nor to the climate of Southern California.

There is a place for Red Clover, but not where alfalfa thrives. (Per lb. 60c) (10 lbs. \$5.00) postpaid. Write for quantity price.

Mammoth Red Clover In England and in English Colonies this clover is called "Cow Grass." The name recommends it to dairymen.

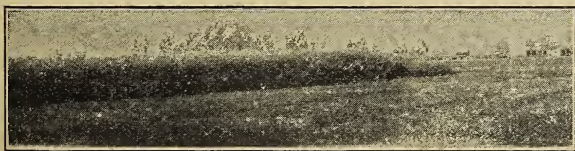
The same instructions for common Red Clover apply also to Mammoth Red Clover. (Per lb. 60c) (10 lbs. \$5.00) postpaid. Write for quantity price.

Alsike or Swedish Clover This is one of the hardiest varieties known. It is perennial and does not winter kill. It will do better on moist land than any other variety of clover, and is suitable for either hay or pasture. When sown with other grasses it forms a thick undergrowth and greatly increases the yield. (Per lb. 60c) (10 lbs. \$5.00) postpaid. Write for quantity price.

Sulphur together with lime is a good fertilizer for alfalfa. When alfalfa has an unhealthy appearance, immediately after cutting, broadcast 200 pounds of slacked lime and one sack of Toro Sulphur per acre, then irrigate. You will soon see a vast improvement in the appearance and growth of your alfalfa.

A Word About Bloating

You dare not pasture cattle on alfalfa during the night and early morning for fear of bloating. But you may pasture them on Sweet Clover; therefore, in order that your cattle may feed during the night and early morning, have a field of Sweet Clover to pasture at that time, and thereby you produce more milk, save the alfalfa and avoid bloating.



Melilotus alba on the dairy ranch of Fred J. Phelps, Artesia. Mr. Phelps says it is very satisfactory on his alkali soil.

A & M GRASSES

During the five years just passed we have at great expense and much labor experimented with many grasses from all parts of the world. We have tried them under various conditions. We fenced in a half-acre right in the heart of a desert where bunch grass was abundant, where many varieties of edible brush thrives, apparently to perfection and wild flowers in profusion. We cleared the ground but did not plow it. About the middle of December we sowed broadcast all over this half acre, one pound of each of Melilotus Alba, Australian Salt Bush, Dallas Grass, Harding, Rhodes Grass, Perennial Rye, Russian Brome, and Smilo. We also transplanted a number of grasses and watered them until they were well established. Everything was done just right on a morning after a rainfall that soaked down two inches.

The rainfall for that season was insufficient to produce any wild flowers neither did we get any results in the half acre.

The following season there was abundant rainfall, and a profusion of wild flowers. Still nothing showed up in the half acre, and none of the plants survived any great period after we ceased to water them.

With this discouraging experience we are slow to recommend any great expenditure toward reseeding the desert where there must be absolute dependence upon rainfall.

The Grasses we offer will be recommended for the conditions under which they are known to thrive.

MR. DAIRYMAN AND STOCKMAN, READ THIS

You want the best as well as the most economical feed you can obtain upon a limited acreage. To get this you want the crops that will give you the best quality and greatest tonnage for your silo. You also want the pasture that will give you best quality and quantity extending over the longest season. You also want the crops best suited to your soil and climatic conditions.

We have given much attention to your requirements and we are sure you will find in these pages something suited to your purpose.

POULTRYMEN

To the small stock breeder and poultryman, you will find in the subject of grasses just as much of interest to you as to the large breeder. Read it carefully.

SUDAN

Write College of Agriculture, Berkeley, Cal., for Bulletin No. 277

Sudan Grass Has made good and has become more popular each year. Cardinal points: Not particular as to soil—endures much alkali—an annual—planted during April first cutting in sixty days may yield four tons of dry hay per acre and three to four tons may be cut each thirty days until October.

Twelve pounds of seed is required to plant an acre in order to produce hay of fine quality.

The seed may be planted with a Superior beet drill or other drill with extra plate or sow broadcast.

Sudan Grass thrives with excessive moisture and endures extreme drouth. The foregoing points are not all the best features of this grass. In the months of August and September, when all other grasses are dry, then is the time that Sudan is most valuable for fall pasture for cattle and hogs.

Sudan Grass is ideal for growing with the Whip-Poor-Will Cow Peas. The stem is stiff enough to support the vines, and the mixture makes a better balanced ration for the stock. It is a good silage. It is a good thing to plant in old alfalfa fields. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

Read

Mr. Hamilton Alexander, a Dairyman of Holtville, early in June 1922, asked us what to plant to feed his cows during August and September and until alfalfa came in again. He stated that he had a rundown field of alfalfa, over-run with Bermuda. We advised that he harrow the alfalfa and broadcast Sudan Grass.

Within four weeks thirty head of cattle were pastured on this seven acres for eleven days. We advised that the cattle be taken off and the field mowed and irrigated. Considerable feed was hauled off when mowed.

Read Their Subsequent Report

"It is wonderful! Every one who has seen our field declares they have never seen anything to equal its growth. We were forced to turn our cows in on it after two weeks from the time we watered it. Its growth was amazing—walks right by alfalfa. We are planning to turn the cows on it again in two weeks. Everyone declares Sudan Grass settles the green feed problem in the Valley. People, too numerous to mention are planning to plant Sudan. Cows just love it and give lots of milk on it. We can't praise it highly enough. When the field was mowed it was discovered there was less Bermuda and more and better alfalfa than when the Sudan seed was sown."

A & M GRASSES—Continued. HARDING GRASS



This picture was taken of a field at Altadena on the ranch of Mr. Thompson. Read the following letter. We can describe it no better:

HARDING GRASS FOR PASTURE—Written by J. A. Stambaugh, Benton Co. Oregon.

"While Harding grass takes kindly to the Northwest, as here in Benton County, Oregon, it is making a splendid growth. Harding grass being a real perennial, once planted, you are done with it until you might wish to put in other crops. It cannot become a pest, as the roots and crown are easily killed, being similar in form to those of timothy and rye grass.

Harding grass will certainly make other parts of the Northwest equal, if not superior, to the Tillamook grass lands, for the dairy industry, not only for dairy cattle, but for beef and mutton as well. It is a good pasture grass that will resist the onslaught of heavy grazing.

In a climate where stock can be run in the open almost the entire year a good growing grass would add much to the wealth of the entire Northwest, making it possible to compete with the territory of cheaper lands, beside giving us a decided advantage in marketing our stock.

Our first planting was done on May 4th, 1919. It grew very well during the following summer. In December, 1919 was the heavy snow 25 inches deep and the temperature as low as 16 degrees below zero, but as the snow melted up, the Harding grass showed up finely with a tender green growth.

This grass was allowed to mature seed, which was cut in August 1920. On March 12, 1921, it had made a growth of from 21 to 36 inches in height, a leafy mass, very tender and sweet.

On May 2, 1921 the growth had reached an average of 40 inches in height, with the tallest blades stretched up to 56 inches. By May 18th, the first heads had appeared out of the boot and the grass had made from 13 to 20 inches growth. Rain fell on Oct. 18th, 1921 and on Nov. 30, 1921 we found the grass somewhat bent by the heavy winter rains, but by stretching up the blades we found the best to be 40 inches in height, while the average was about 30 inches.

Under the test for tender growth, have been cutting some of the 1919 planting once a week, and up to Nov. 4th had been making 4 inches growth per each seven days. From Nov. 14th, to Nov. 28th, two weeks, the growth was 5½ inches, the weather being rather cool.

On May 30th, 1921 we planted four acres of Harding grass. Being rather late we did not get more than an 80% stand. But it is looking well and some of the bunches have make a spread of 5½ feet.

The first season this grass spreads more in proportion than it grows upright. I have now grasses growing on four different soils."

It grew quite as well on our experimental plot. (Per oz. 50c) (lb. \$3.50) postpaid.

ALFILARIA

(*Erodium cicutarium*)

Alfilaria or "filaree" has been and still is a life saver for the California ranges. It grows wild without any attention in all classes and conditions of soil except swamps and excessive alkali. Soon after the first heavy fall rains have saturated the ground the "filaree" begins to make its appearance. It is good pasturage at all stages of its growth, even when mature and dried up. In nutritive qualities it compares favorably with alfalfa and live stock of all kinds fatten on it readily. It is hardy even where the winter temperature reaches zero or below. Little or no preparation of the soil required. It attains perfection where introduced in Texas.

Sow 6 lbs. of seed per acre. Sow just before the rainy season. (Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

AUSTRALIAN SALT BUSH

(*Atriplex semibaccata*)

Cardinal points: For range near the coast or interior lowlands where fogs are of frequent occurrence—any kind of soil—endures much alkali—thrives with a minimum of moisture—very succulent during winter, spring and early summer, when it is relished by all stock—becomes parched by heat in late summer, then it is less palatable to stock, but they will thrive if forced by hunger to eat it—it seeds freely. Requires no preparation of soil for seeding. Cannot cut and dry as hay—has one tap root—easily eradicated.

(Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

RHODES GRASS

(*CHLORIS CAYANA*)

Write Department of Agriculture, Washington, D. C.)
Ask for Farmers' Bulletin No. 1648



Another year of experience with Rhodes Grass has added much to its popularity. It might be claiming too much to say that for a permanent pasture field it excels alfalfa, but it is no exaggeration to say it has a wider usefulness, because it will thrive on soil too alkaline for alfalfa. It will endure more drouth, more pasturing, more neglect, and will support as many head of stock per acre.

The following extract is from the U. S. Department of Agriculture Bulletin 1048:

"Rhodes Grass was first cultivated because of its pasture value. It bears pasturing well, recovers quickly after it is eaten down, and is relished by all kinds of live stock. In pastures favorably located, Rhodes Grass will support about two steers to the acre for 9 to 10 months and double that number during the more favorable parts of the year. The quality of hay made from Rhodes Grass is superior to that of most other grasses in that it contains a larger proportion of leaves, while the stems are slender, tender and sweet, so that the hay is eaten with very little waste. It retains its color well in drying, therefore making an attractive bale for the market."

Pursuant to our advice there are now several plots of Rhodes Grass growing amid the tar weed around Hynes and Artesia. Notwithstanding the indifferent treatment it has received it promises to eradicate the salt grass and tar weed.

In every instance the better stand was obtained by broadcasting the seed over the salt grass. Flood the field frequently after sowing the seed until it has started to grow; then irrigate as usual.

The best field of Rhodes is located along the boulevard south of Artesia. Mr. Campbell is very much pleased with it.

Another plot is on the ranch of Capt. J. D. Fredricks one mile south of Hynes. In spite of the fact that the cattle were permitted to graze upon this plot throughout the winter and summer since it was planted, it has established itself, particularly amid the salt grass.

Mr. Dairyman, there is no longer any excuse to permit any alkali lands to be wasted with tar weed. Your alkali lands are now a valuable asset. Rhodes grass will increase the value of these acres several fold. See what Mr. Campbell has done and be convinced.

Mr. McArthur of this city planted twenty acres near Holtville, in Imperial Valley, on soil that was white with alkali. He is very enthusiastic concerning it. He says it is the most valuable grass that has ever come to Southern California. There is no longer any excuse for waste places; every acre of alkali soil may now be converted into valuable grazing land.

Rhodes grass does not grow underground sprouts like Johnsson or Bermuda grass, but sends runners over the surface like strawberries. It is easily eradicated.

Rhodes Grass will smother Bermuda and other weeds because of its dense growth. It is easily eradicated by being plowed once and let stand for sixty or ninety days. It adds humus to the soil.

The best time to plant Rhodes Grass is from March 1st to September 1st. Broadcast 12 pounds of seed per acre, going over the field twice, once north and south and east and west, sowing six pounds each way. Keep the soil continually moistened until the grass is established. It grows so rapidly that the first cutting may be had the sixth week. Do not pasture until after the second cutting.

(Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

RUSSIAN BROME GRASS

(*Bromus inermis*)

Bromus inermis is one of our hardest perennial grasses; no amount of cold will kill it. It withstands the severest drought, and water may stand on it for weeks. It will grow on any rich soil.

It requires twenty pounds of seed per acre.

Russian Brome Grass is essentially a winter pasture grass, but it also makes good hay. All kinds of stock are fond of it, and no other grass, unless it be orchard grass, will furnish grazing for so large a portion of the year. Its producing and feeding value for hay is about equal to that of timothy.

It keeps alive under conditions that would destroy many other grasses and it will then grow vigorously when moisture is brought to it. It can be made to render excellent service in states where rainfall is not more than 12 to 15 inches.

(Per lb. 60c) (10 lbs. \$5.50) postpaid. Write for quantity price.

A & M GRASSES—Continued.

ORCHARD GRASS

COCKSFOOT

(Dactylis glomerata)

Cocksfoot will grow well under a wide variety of conditions. It is not a particularly drouth resistant grass, but it readily adapts itself to nearly all types of soils. For forty years it has thrived on the rocky and hilly lands of New Zealand. Where other grasses died out it produced luxuriant crops of grass. It is a stooling plant. It seeds freely and any bare spots on the ground are soon seeded by the plant itself. The plant grows three to five feet high. It is not easily killed out by close grazing as many pasture and ranch grasses are.

This grass does well sown either with or without other grasses. It is frequently sown in such pasture mixtures as white clover, red clover and rye grass. If sown alone, 25 or 30 pounds of the Cocksfoot seed will insure a good stand of grass.

Keep the cattle away from the grass until it is well established. Otherwise the young plants may be eaten so close and trampled so much that they will die. After the grass once makes a good growth the danger of this is slight.

(Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

RED TOP

(Agrostis vulgaris)

Red Top is a perennial grass which grows from a few inches to five feet in height under varying conditions of soil and climate. But the average height is probably 18 to 20 inches. It is now more highly esteemed as a pasture grass than a hay plant, because of its power to endure, and because of the degree of its permanency, but in many areas it is still considered an important hay plant.

No other useful grass would seem so well adapted for growing in wet situations, even in places so moist as to be saturated with water for a considerable portion of the late autumn and the early spring. It will even stand shallow submergence for several days, when the weather is cool, and for a longer period than almost any other useful grass when it is warm.

The soil should be carefully prepared. Thoroughly pulverized and clean of weeds. Sow broadcast 14 lbs. of seed per acre.

(Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

PERENNIAL RYE GRASS

Also called Australian Rye. Probably the oldest cultivated grass in existence, having been in cultivation previous to 1677, and is yet grown for pasture probably as extensively as any other grass. It quickly covers the ground with a dense mat of foliage ten inches deep with seed stems twenty inches high. It is perennial, but endures seldom beyond the third year. It is an ideal crop for rotation.

Sow in the fall with barley, oats, wheat or alfalfa, to be pastured. It is excellent for fattening cattle.

Sow 40 pounds per acre. (Per lb. 35c) (10 lbs. \$3.00) postpaid.

PACIFIC RYE

An excellent hardy grass for the coast range, on hillsides and meadows. It resists drouth wonderfully and is quick to recover after a slight rainfall. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

ITALIAN RYE GRASS

(Lolium Italicum)

Arrives earlier at maturity than Perennial and produces a large amount of nutritious herbage. Its duration being but two or three years, it is not adapted for permanent pastures, yet highly valuable for rotation of crops. It is specially adapted for sowing in autumn with oats, barley, rye or clover, as a catch-crop for fattening stock. Sow 30 pounds per acre. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

SMILO GRASS

(Oryzopsis miliacea) Many Flowered Millet

(Recommended by the University of California.) It is a hardy evergreen perennial, drouth-resistant bunch grass that thrives on dry hills among rocks and brush, and is a wonderful producer when planted in good soil but must have sufficient moisture to get good root system before the dry season. It also thrives under trees.

Smilo will not become a pest, as it has fine fibrous roots which penetrate very deep, but is easily cultivated out.

Do not plant seed over 1/4 inch deep. Better sow on top of ground and harrow lightly. When planted deep we have known Smilo to be in the ground two years, but as soon as brought to the surface and got sufficient moisture it came up and made a good stand.

When possible plant seed before fall rains, during September and October, so that it may get a good root system before the cold weather and will stand the following dry season.

(Oz. 50c) (lb. \$3.00) (10 lbs. \$26.00) postpaid.

TIMOTHY

This is the grass so popular in the New England and the Middle Atlantic States. Where it is usually mixed with Mammoth Red Clover. This mixture makes excellent hay or pasture. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

BERMUDA GRASS

(Cynodon dactylon)

Bermuda Grass is unquestionably the best pasture grass in the south, viewed from the standpoint of palatability, productiveness and endurance. There are reasons for believing that in its proper sphere it will produce more grazing and more meat than blue grass under the most favored conditions. Sheep can graze upon it from 7 to 9 months in the year according to locality. Sow seed during May and June, five pounds per acre. (Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

CHEWINGS FESCUE

One of the best grasses to sow in a meadow. Mixed with Red Top and White Clover it is a valuable pasture grass. It is also suitable for lawns and putting greens. (Per lb. \$1.00) (10 lbs. \$9.00). Write for quantity price.

DALLAS GRASS

(Paspalum dilatatum)

This grass should be established on pastures.

Grows on any kind of soil—endures some alkali—excellent for permanent pasture on marsh or mesa—grows winter and summer with moisture—excellent for hay—may be cut every six weeks—becomes dormant with drouth but revives with less moisture than any other grass, yet will survive if submerged for several weeks—stools and seeds freely. It has been tried and proven in this section to be one of the best of grasses for permanent pasture in meadow or on mesa where it must depend solely upon the season's rains.

The seed takes root among the weeds and devil grass, choking out everything in its way. The dense tufts of grass make a thick sod capable of supporting the cattle on marshy land. The stock relish it fully as well as alfalfa. It is as easy to eradicate as Timothy or as any other bunch grass. Ten pounds is sufficient to sow one acre broadcast.

Read

I am sending you under another cover a sample of grass that has been growing in my yard in a dry sandy loam for several years. It survives the frosts at this altitude of 3,500 feet. It comes up every Spring from the roots and spreads freely from seed.

C. S. HILL, Campo, Cal.

This proved to be Dallas grass.

The second year's growth of Dallas Grass on our trial ground excels all the low bent grasses for quick recovery after drouth. (Per lb. 75c) (10 lbs. \$6.50) postpaid. Write for quantity price.

Mr. Stockman: You may want to place a tank at a spring somewhere on your range and would like to know how large a tank you will need. The following table gives the capacity of a tank of a given size. Know the number of cattle you have and estimate that each head will require five gallons per day.

A tank 6 feet in diameter and 8 feet deep holds 1776 gallons and would keep 100 cattle for 4 days. 25 cattle 15 days.

Numbers of the diameters given below hold the following number of gallons for each foot in depth:

A tank 6 feet in diameter holds.....	247 gals. per ft.
A tank 8 feet in diameter holds.....	375 gals. per ft.
A tank 9 feet in diameter holds.....	475 gals. per ft.
A tank 10 feet in diameter holds.....	586 gals. per ft.
A tank 11 feet in diameter holds.....	710 gals. per ft.
A tank 13 feet in diameter holds.....	992 gals. per ft.
A tank 15 feet in diameter holds.....	1321 gals. per ft.
A tank 20 feet in diameter holds.....	2349 gals. per ft.
A tank 25 feet in diameter holds.....	3670 gals. per ft.
A tank 30 feet in diameter holds.....	5080 gals. per ft.

Figured on the above basis, a cistern 15 feet in diameter and 10 feet high would hold 13,210 gallons. A cistern 20 feet in diameter and 15 feet high would hold 35,235 gallons.

SULPHUR HELPS IN MERCED

Tests undertaken this year by Farm Adviser Grass show that the combination of lime and sulphur as an alfalfa stimulant has proved a great success for alfalfa on light soils. In certain cases sulphur alone seems sufficient. On heavy soils materials are slower in action and results are not very apparent.

With sulphur alone 220 pounds per acre are used, and when lime also is applied only 110 pounds of sulphur are used and 300 pounds of lime.

Melilotus alba for the Range

Mr. Stockman, as soon as you read this send for some seed of this Sweet Clover and just to get a start sow at the rate of one pound per acre all over your range. On any kind of soil. If not pastured too closely you will soon have a valuable range for your stock.

A & M Field Corn



Los Angeles Stock Yards, opened November 1, 1922.

What It Means

The opening of the Los Angeles Stock Yards, November 1st. It means that the Cattle and Sheep of the vast range reaching west from Texas, Colorado and Montana may now be shipped to Los Angeles.

To Los Angeles it means a great packing plant, the products of which will be shipped through this port to all parts of the world.

Mr. Cattleman it means you must improve the pasture and systematize grazing on the range in order that you may produce more stock.

Mr. Stockman with this increased demand for more and better stock at a higher price means that you will increase production. In order to have more stock you must do more intensive farming, grow more forage and grain in order to deliver genuine "Corn-fed" hogs.

On this day there were at the stock yards fifty-nine car loads of cattle, eleven car loads of sheep and six carloads of hogs.

Now Mr. Farmer do you also realize that the thousands of animals brought to this stock yard must be fed the best of high grade feed in order to keep them in good condition. Do you realize the enormous market there will be for all the corn you grow?

Grow more forage for the silo, and grow more corn for the grain.

Mr. Farmer if you have good corn land, GROW MORE CORN!

The safest varieties of corn you can grow without irrigation are the King of the Earlies, Mexican June and King Philip. With irrigation grow Orange County Prolific.

ORANGE COUNTY PROLIFIC

THE MOST SATISFACTORY SILAGE CORN

Orange County Prolific was introduced by us in 1911. At that time we had stalks on exhibition with nine ears of commercial size and others that were smaller.

The season just past indicates, by numerous testimonials, that Orange County Prolific corn leads all other varieties both for corn or silage. From Arizona where the sacaton June Corn is considered the only corn for that state, we have a letter from Mr. Joyce saying—"The Orange County Prolific produced more and better corn than the June." Orange County Prolific will give you more and better silage than any other corn. It is the most satisfactory variety to grow for the silo.

We have a report that the Orange County Prolific planted July 25th produced 28 tons per acre. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity prices.

Dear Sir:—

"I would like to let you know that from your seed of Orange County Prolific, we cut 105 tons of ensilage from 3½ acres. Some of the stalks are as high as 18 feet."

NICHOLAS KNOPP, Calif.

Eureka Ensilage (White Dent)

This variety is also a favorite for the silo. But some objection has been expressed, that the stalks are too large to be handled conveniently. This would indicate that it had been grown on very rich soil. It is very stalky and stands up well. The tonnage of silage per acre will average well above 20 and may yield 30 tons. Any claim above this is based upon individual acreage. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

Mexican June The corn for the arid southwest. When the white man was a pioneer in Arizona and New Mexico, he tried to grow corn but failed. The country and climate were condemned; corn could not be grown, but thanks to the good work of the various state and federal experiment stations, we have the Mexican June. This has been bred up by years of selection from seed which has existed among the Indians from time antedating the Aztecs. Imperial Valley growers realized its merits ten years ago. In Arizona, New Mexico and Texas, it is now grown where no other variety will thrive. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

A NEW CONDITION

That Governs the Price of Seed Corn

Since the coming of the silo a new condition has come upon us. Before the silo, corn was valued according to the yield of grain and the various varieties were gauged from that point of view, but since the coming of the silo varieties are valued according to the tonnage of silage they will produce.

The silo has caused an enormous increase in acreage planted to corn, but a deplorable scarcity in the supply of locally grown corn for seed.

It is true the Southwest can import corn for seed, but we should grow enough for both feed and seed. The farmer says: "I can grow silage and get more money per acre; I can buy my seed cheaper than I can raise it."

You can grow a field of corn for silage and harvest the crop from thirty to forty days less time than required to mature grain, thereby releasing the ground for a fall crop. A very important phase to consider at planting time.

The result is a scarcity of seed corn, particularly those silage varieties which we cannot import.

CORN FOR GRAIN

We offer many sure and big yielders, but your selection should be governed by your local conditions. For dry farming, we recommend: Pride of the North, King of the Earlies, Mexican June and King Philip.

For big yield where irrigation is available we recommend all of the varieties listed here, with special stress upon the acclimated Golden Beauty for yellow corn and Orange County Prolific for white corn.

Do not overlook the fact that Orange County Prolific is a leader in yield of grain as well as silage.

All varieties listed below: (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

WHITE DENT

Hickory King	110 days
Champion White Pearl	110 days
Iowa Silver Mine	110 days
Wisconsin White Dent	110 days

YELLOW DENT

Reid's Yellow Dent	100 days
Pride of the North	90 days
King of the Earlies	90 days
King Philip Flint	90 days

Mexican Tamale Corn This is a pure white corn. The grains are so soft that they may be crushed with the teeth into a fine meal, and on this account it is called flour corn. It is used extensively in the making of tamales. It is also used largely for roasting ears because of its earliness. It will mature a good crop with very little irrigation. (Per lb. 30c) (10 lbs. \$2.50) postpaid.

Sweet Corn for Dairy Cows

For this purpose we offer Stowell's Ever-green. It will grow more green feed than any other sweet corn. Seed is usually scarce and the price governed by the supply. Drill 40 pounds of seed per acre. If interested write for price.

About Corn—More than 5,000,000 bushels of corn was produced in California in 1919, yet this is scarcely half enough to meet the local demand. This condition ought not exist because there is ample acreage where corn may be grown under irrigation, and near the Coast where it may be grown without irrigation. Where corn cannot be irrigated plant the "King of the Earlies" and "Mexican June" and "King Philip Flint."

THE WONDER FORAGE



This is the fifth crop of Wonder Forage from one planting during 1919. Two cuttings a season. This represents the third season.

THE WONDER FORAGE PLANT

It stools from ten to forty full sized stems the thickness of a thumb and smaller. When the main stems mature, separate branches grow from each joint bearing other seed-heads.

The stems are succulent and sweet, as saccharine cane, not dry as non-saccharine cane, therefore it is as good as sorghum for dairy cows. Stock will eat every particle of it.

Our demonstration clearly indicates the Wonder Forage Plant will yield double the tonnage of any other sorghum. Five pounds of seed is sufficient to plant an acre.

Dairymen, each year that you delay planting this Wonder Forage Plant (Sudan Sorghum) you are missing something worth while for green forage. One acre of Wonder Forage is more valuable than three acres of Sudan Grass, both in quantity and quality. One acre is equal to two acres of sweet sorghum. The latter can be cut but once, the former twice with equal tonnage. (To do this will require good soil and ample irrigation, but it will do it). It has less sugar content than sweet sorghum, but must be classed as a saccharine. Do not waste another season by holding off. It is so much better than Sudan that there can be no comparison.

Mr. McConnell planted seed in June, 1919. August 15th, he made the first cutting. It stood ten to twelve feet high, fully headed. The tops are panicle shaped and, because of the multitude of stools, it easily leads other varieties in quantity of grain, none of which is lost in harvesting, which was done with an alfalfa mower. About October 1st, it will be ready for sixth cutting, which he says, may be done with the same mower by raising the blade.

A letter from Mr. R. M. Hiatt, Cibola, Arizona, states: "I have the most wonderful crop of the Wonder Forage Plant that ever grew out of the ground from the seed you sent me. Will you please tell me when to cut it."

We planted twenty acres to your Sudan Sorghum (Wonder Forage) and fed it to the finest Jerseys in the world. We will never plant the old time Sudan again. Your wonder Sorghum makes more milk.

BRECKENRIDGE SOUTH, Brooks Co. Texas.

THE WONDER FORAGE PLANT

The Crop for Soiling Last year we gave special recommendation to this for use in the silo because of the enormous production, but we have been assured by Mr. Pellisier of the Los Angeles Creamery, who tried it last year, that because of its constant growth of green stems it is unfitted for the silo, but for green feed it beats all sorghums.

The above picture indicates what it would be worth in green feed to the grower who has rich soil and an abundance of water. If you have these, we are sure there is no sorghum or other crop that will equal it in tonnage of rich valuable green feed.

This picture was taken at the dairy ranch of Mr. McConnell at Lankershim. This is the third season for this field and as you can see it is ahead of any sorghum for yield.

The last season was a severe one for that section. The late freeze destroyed all deciduous fruit and the walnuts, but this came through unharmed. Mr. McConnell says the reason lies in the fact that it stood about three feet high when the first frost got it. He let it stand dormant all winter and when the warm weather arrived he never saw anything send out new growth like this.

Stockmen, if you want a rich, green feed, sow the Wonder Forage.

(Per lb. 40c) (10 lbs. \$3.50) postpaid. Write for quantity price.

The Silo A Big Money-saver. If you have five or more head of stock, it will be profitable for you to have a silo. Therefore, if interested write at once to the University of California, College of Agriculture, Berkeley, California, for circular No. 138 (Sept. 1915), entitled "The silo in California." After reading it you will have all the information you will need, and you will at once go about building a silo. Just the size you will require, and you will know about what it will cost. This circular tells you what crops are the best and what proportion of water to add; what state of maturity crops may be cut; in short, the information in the circular is so complete you cannot make any mistake, from the building of the silo to the time when the silage is ready to feed to the stock.

BEST CROPS FOR SILAGE

Indian corn heads the list as recommended by the Dept. of Agriculture. The varieties that exceed in tonnage yield per acre are: Orange County Prolific, Eureka Ensilage, Mexican June (Sacaton) and Hickory King.

SORGHUM FOR THE SILO

SACCHARINE SORGHUM

It is usually planted in rows 3½ feet apart, using from 5 to 8 pounds of seed per acre. Grows from 10 to 15 feet high.

This kind of sorghum is distinguished from the Non-Saccharine because it is from these varieties that syrup is made.

Write College of Agriculture, University of California, Berkeley, California, ask for Circular No. 198, concerning syrup from sorghum.

But these Sorghums are more generally grown for forage because they will thrive well with little moisture, but on good soil with irrigation will produce 20 to 30 tons of silage per acre.

Address: University of California, College of Agriculture, Berkeley, Cal. Ask for Circular No. 167, also Bulletin No. 293.

At our demonstration of Sorghums the Silver Tip outclassed all other varieties for tonnage of green fodder. Texas Seeded Ribbon Cane was next in line. It is more branching than others.

Silver Tip The Sorghum for syrup. A local manufacturer of Sorghum syrup says: "The Silver Tip excels all other Sorghums in quantity and quality of syrup. A yield of 400 gallons per acre was the average obtained from my field. It will yield 20 tons of silage at one cutting.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Honey This variety proved to be very desirable because of the large yield of grain, as well as enormous growth of forage.

It is given special recommendation in the Farm Bureau Monthly, and has proven highly satisfactory to all who grow it.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Early Amber The Early Amber has been grown in California for more than thirty years and has always proven entirely satisfactory. It grows twelve feet tall when allowed to mature, but it stools to a wonderful extent when cut about every four weeks.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Texas Seeded Ribbon Cane Texas Seeded Ribbon Cane is one of the best crops that can be grown to use as ensilage on account of the enormous yield it makes per acre.

"Land is too valuable to get from 5 to 10 tons of silage when the same acres can yield 25 to 30 tons per acre with same expense. Others have received these results and any farmer can do the same." (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

READ

If you need forage for your horses, cattle or hogs, Sorghum planted about April 1st will furnish you the best feed in the shortest space of time. One-half acre will feed four head of stock all summer if only enough is cut each day for one day's need. In this way one can cut continuously all summer. As much as 40 tons may be cut from one acre.

WHEN TO HARVEST SORGHUMS FOR SILAGE

Many farmers are growing sorghum for silage. The question of when to cut it is perplexing some. The experience of farmers who have grown this crop for silage purposes is that it should be fairly mature before cutting. The stalks may look rather dry, but Sorghums should not be cut for silage until the seeds are hard. If cut too early the silage is apt to be acid and much inferior to silage cut at the right time.

Ten Reasons Why

Here are ten good reasons why a silo should be on every farm where livestock is kept:

1. The silo preserves the palatability and succulence of green crops for winter feeding.
2. It conserves the entire crop.
3. The silo increases the live stock capacity of the farm.
4. Silage can be fed in summer when pastures are short.
5. Silage is relished by all kinds of stock.
6. It is digestible and aids in the digestion of other foods fed with it.
7. Silage reduces the cost of production of milk, beef and mutton.
8. It will increase the milk flow.
9. Silage promotes the health of the herd.
10. The silo provides an economical method for the storage of roughage.

Non-Saccharine Sorghum for Grain and Forage

All prices are subject to market change

If large quantities are wanted by mail send the necessary postage. See inside front cover page.

A & M Selected Dwarf Milo Maize heads the list for grain, and Feterita a close second. These crops are given special mention because being drought-resistant they grow very well in the southwest.

Non-saccharine Sorghums follow in choice for silage with Dwarf Milo in the lead because of the enormous yield of grain adding much to the value of the silage. These should be cut after the seed is hard, never when green.

For full information concerning Sorghums write College of Agriculture, University of California, Berkeley, California. Ask for circulars No. 187 and 177. Also Bulletins No. 278 and 293. Also circular entitled: "Precaution Against Poisoning by Johnson Grass and Other Sorghums."

Write U. S. Department of Agriculture, Washington, D. C., for bulletin No. 333, No. 698, No. 972, No. 827.



Actual Photograph A & M Dwarf Milo Maize. 6000 lbs. of grain per acre.

A & M Selected Dwarf Milo Maize

ASK FOR OUR FREE BULLETIN

The King of all Sorghums for Grain. Is much preferred to the tall variety because it stools wonderfully and matures a large head of seed on each stool, producing 3500 pounds of grain per acre, and the stalk being shorter and having more foliage, makes it more desirable for fodder. Dairymen find that the cows will give more and richer milk when fed on it. It is the right crop to plant in young orchards because it will not shade the small trees.

A & M Dwarf Milo Maize is grown from selected stock. For many years the heads were carefully selected in the field before harvesting. Now we have a strain that grows about four feet high and produces forty per cent more than it did three years ago under the same climatic and soil conditions.

It is highly recommended by the State Department of Agriculture for silage. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Feterita Of the many non-saccharine sorghums offered in this book—none have proven more popular from the start than Feterita, on account of its astonishing growth after it becomes well rooted. Every testimonial received expresses astonishment at its rapid growth.

Sow 12 pounds of seed per acre drilled two feet apart; by so doing it yields 5000 to 6000 pounds of grain per acre.

The grain has about the same feeding value as Egyptian Corn or Milo Maize; yields from two to three tons of grain per acre. The seed is more susceptible to cold than other sorghums, therefore should not be planted so early, nor should it be planted in cold soil.

The second growth stools wonderfully, producing several tons of excellent forage for pasture or for ensilage after the seed has been harvested. It thrives luxuriantly on soil so alkaline that field corn will not thrive. The heads are upright. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Kafir Corn Grows similar to the Milo Maize except the head is upright instead of hanging over like Milo Maize and Egyptian Corn. It will yield two to three thousand pounds of grain per acre. Sow 8 pounds of seed per acre drilled. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Shallu At our demonstration, Shallu tillered more than any other sorghum except the Wonder Forage Plant. The second growth was particularly fine. We would place Shallu at the head of the non-saccharine sorghums were it not for the destruction of seed by birds. It is hardly possible to harvest a crop of seed where birds are at all numerous. For green feed it is hard to excel.

Shallu will thrive luxuriantly in extreme Alkaline soils. Both the green stalks or the ripe grain are greedily eaten by all kinds of stock from horses to chickens.

(Per lb. 25c) (10 lbs. \$2.00) Write for quantity price. Mr. de Venelle: "I planted 15 pounds of your Shallu and harvested 1900 lbs. of grain and 50 tons of fodder, without irrigation."

Higara

Similar in appearance to White Kafir but is more prolific; the grains are somewhat larger and are eaten more greedily by stock and poultry. It grows about six feet tall and stands upright. It is easily harvested and will yield four to six thousand pounds of grain per acre. It is very popular in Arizona and in the Imperial Valley. (Per lb. 25c) (10 lbs. \$2.00) postpaid.



A & M Yolo

Yolo

There has long been a demand for a grain sorghum that could be harvested with a header. Thanks to the California State College of Agriculture, Davis, Cal., we have the new non-saccharine sorghum called White Yolo. The picture illustrates it very well. On soil that is uniformly right it attains a uniform height of about three and a half feet. With the header set at two and a half feet high, practically every head would be harvested.

It stools from the ground, has no branches. The stools are stocky and leafy and as many as twelve to a plant. The tonnage of forage per acre must be excessive when considering the height. It has more sugar than Milo. The grain is white. We do not hesitate to recommend it. (Per lb. 40c) (10 lbs. \$3.50) prepaid. Write for quantity price.

Egyptian Corn

Like the preceding fodder crops, it is grown chiefly for the foliage to pasture when young, but yields largely of grain. The chief merit of these fodder crops is in their hardness to produce fodder and grain with almost no rainfall or irrigation. Sow eight pounds per acre drilled. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Millet

Write for quantity prices on all varieties

Culture same as for Sorghum. Sow from April 15th to Aug. 1st.

Millet would be grown more extensively were it not for the destruction by birds.

Therefore in order to get best results it is important that you plant the variety best suited to your purpose.

In order to acquaint ourselves with the characteristics of each variety that we may give intelligent advice we planted eleven varieties on our demonstration plot.

Russian, or Hog If moisture is lacking and you need pasture in the shortest space of time, plant Red Russian or Hog Millet; there is a very slight difference, and both may be pastured within six weeks; both mature seed within sixty days. It grows three to four feet tall. This seed may be harvested by heading and a second crop will mature within another thirty days. We recommend it for a quick temporary pasture. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Japanese Grows rapidly four or five feet tall, branches freely with liberal foliage, matures seed within seventy-five days, seeds freely. We recommend it for early pasture or to cut repeatedly for hay. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Golden or German Grows three to four feet tall, branches freely and is enormously prolific of seed. The heads are covered with small bristles. Where birds can be controlled this is probably the best variety to grow for seed. Where moisture is scarce this is a very good variety to grow for pasture. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Pearl or Pencilaria Grows eight to ten feet tall having heads eight to ten inches long, prolific of seed that is hard and not eaten greedily by any kind of stock. When young the enormous growth of foliage is succulent, but becomes coarse and objectionable and should be silaged before feeding.

We recommend this variety for green feed to cut when two to three feet tall. It is eaten greedily by all stock. (Per lb. 35c) (10 lbs. \$3.00) postpaid.



Plant Sunflower for Windbreak

Sunflower stalks are rich in potash, plow them under, do not waste them.

Mammoth Russian Should be planted largely for seed or silage. It makes a good windbreak around your garden. It is a valuable plant that grows anywhere with little attention. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Dwarf Essex Rape

Pasture for Hogs, Sheep and Poultry

There is a need and a place for an extra quick growing green forage crop for use any time during fall, winter and spring, and our Dwarf Essex Rape fills that need exactly.

Rape can never become a pest as it belongs to the same general family as the turnip and rutabaga, and when planted under favorable conditions of soil and season, it makes an immense crop of green forage, juicy and succulent, and often at a time of year when little green feed is available.

(Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

POISONING BY SORGHUM: Many are reluctant to feed Sorghum for fear of poisoning stock, but we herewith give the facts:

When cut before flowering, it must be allowed to wilt in the sun for several hours before being fed to the stock as at this stage it contains a proportion of prussic acid and is liable to be poisonous. This disappears after the flowering stage is reached. The poisonous quality is more noticeable in the second crop, or, when after a period of drought or frost when young it has become stunted. In the form of properly prepared silage or dry fodder, Sorghum is never poisonous, but it is dangerous to pasture or to feed green sorghum after it has been frosted or stunted; it should then be cut and dried or ensilaged.

SEED FOR BIRDS

Rape Thousands of sacks of rape seed are imported each year, while it grows wild in some localities of Southern California. It is a profitable and easy crop to grow and harvest. (Per lb. 25c) 10 lbs. \$2.00) postpaid. Write for quantity price.

Canary This can be grown quite successfully here. It is just as easily grown as barley, and requires the same cultural treatment. Several carloads are imported each year into Los Angeles. The consumption throughout the United States is enormous. All of this could be grown in California. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Hemp What has been said here of Canary is applicable also to Hemp. It is easily grown and requires about 100 days to mature a crop. It requires sixty pounds of seed to plant an acre, and should be sown in February. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Sunflower The principal food for parrots. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Mixed Seed for Canaries

Our Bird Seed is Fresh We buy it in car lots and mix it to proper proportions making a well balanced feed.

When you feed A & M bird seed you have no sick birds. (Per lb. 15c) (10 lbs. \$1.25) f. o. b. here. Write for quantity price.

Treating Grain Seed for Smut

1. Dissolve 1 pound of bluestone (copper sulphate) in 4 gallons of water, which must be held in a wooden trough or tub.

2. Dip the seed, contained in half sacks or butts, for three to five minutes in the bluestone solution. Shake out the air as the sacks soak.

3. Drain the sacks for fifteen minutes, and then dip in lime solution, prepared by slacking 1 pound of quicklime in 3 gallons of water. If the lime solution becomes blue, replenish with a new solution.

4. Dry thoroughly before storing.

When barley is treated with this solution, or when the lime dip is not used after the bluestone treatment, use 1 pound of bluestone to 5 gallons of water. Wash seed in water before dipping in bluestone where the lime dip is omitted.

Before dipping the seed in bluestone the smutballs must be washed out by poring the wheat slowly into water and stirring it, when the balls may be skimmed off the surface.

Barley as a Winter Pasture

Several other plants furnish good winter pasture, but none are so valuable as Barley. It affords grazing earlier, and more abundantly. It recovers more rapidly after being grazed down. It is more relished by stock and more wholesome. It stands up so that stock can eat it with less dirt or other objectionable matter, and it is never affected by rust.

Sown in September it affords good grazing until May, but if the stock are taken off in March, a good crop of grain can be harvested.

For this purpose sow 100 pounds per acre and irrigate if needed.

Barley sown in an alfalfa field during October will make good pasture during the winter when alfalfa is dormant, or it may be grown for hay without injury to the alfalfa.

GUARANTEE—Complaints that seeds are not of good germination might quite as often be attributed to other causes than the quality of seed. There are many contingencies arising to prevent the best seed giving satisfaction, such as plowing too deeply, too shallow, in too wet or too dry a soil, insects may destroy the plants as soon as or before they appear, wet weather, cold weather, frosts, chemical changes in the seed bed induced by temperature, etc. For many reasons it is impracticable to guarantee seed under all circumstances, therefore the Aggeler & Musser Seed Company give no warranty, expressed or implied as to description, quality, productiveness or any other matter of any seeds, bulbs, plants or trees they send out, and they will not be responsible in any way for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

Read

The most dangerous offenders of the pure seed laws are irresponsible growers who gather seed from surplus crops regardless of any conditions surrounding the growth, and have no facilities for cleaning, and will offer the seed by the wayside to anyone who will purchase it.

Mr. Planter, we advise that you get a strong microscope and with it examine any seed before you buy. You will then not hesitate to pay the higher price for clean seed. When you go to the store for your seed, ask for A & M Reliable Seeds; they are pure and clean.

It is important that growers give attention to the description in this catalog in order that they will plant the grain best suited to their locality with regards to soil and climatic conditions.

Grain and Field Crops

When field seeds are desired by mail, add the required postage.
See inside front cover page.
Write for quantity prices on all grains.

With our up-to-date facilities for cleaning all kinds of seed, we aim to have all field seeds as clean and free from foul seeds as it is possible to make them.

Grain and other field seeds that pass in the open market as clean will often show ten per cent or more of broken grain, foul seeds, chaff and dirt. Should our prices appear higher than others, you will find upon investigation that they are cheaper, because of the purity of the seed.

Legal Weights—Pounds per Bushel

Barley	48	Clover Seed	60	Potatoes	60
Beans	60	Millet	50	Rye	55
Corn	56	Oats	32	Wheat	60

Write the Department of Agriculture, Washington, D. C. Ask for Farmer's Bulletin 939, Subject: "Cereal Smuts and the Disinfection of Seed Grain."

BARLEY

Sow 50 to 60 Pounds per acre.

We aim always to have the best it is possible to procure. We cannot fix a price because of the fluctuations of the market. Bearded Barley, Beardless Barley and Baid Barley. Write for prices.

TRY THIS

One rancher whose name we cannot recall, told us that he sows his barley early and cuts it three times for hay; each time before the heads appear, and then allows it to head out for grain. Try it.

MARIOUT BARLEY

If interested write the U. S. Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 785.

The Department of Agriculture says, in Bulletin 312, regarding Mariout:

Mariout barley introduced by the agricultural experiment station of the University of California, eventually will replace the common barley over large areas to which it is adapted, as already it has in Yolo and Solano Counties.

Mariout barley is leading common barley in yield this season by more than four sacks per acre. While not regarded as superior under all conditions, the value of Mariout has been well proved on dry light soils, in hot dry localities, and for late planting.

H. L. Roberts, of Beaumont Riverside County, reports yields of 25½ sacks per acre from Mariout and 17 sacks per acre from common barley. Says Roberts: "I think Mariout is the coming barley, but believe I planted too early (November 10, 1919), and it headed out so quickly that it was frosted some."

C. V. Storm of Winchester, Riverside County, reports yields of 25 sacks per acre from Mariout and 14 sacks per acre from common barley.

Donald C. Ingersoll, of Encinitas, San Diego County, reports Mariout to have yielded 23 sacks per acre and common barley 15 sacks per acre, and concludes that Mariout is a wonderful crop for the light mesa soil of San Diego County.

Have in mind this is a dry land or desert plant, and should be planted late enough to bring the seed to mature after the rainy season is well by. Also, that it must not be expected to do well on cold marsh or damp land. Write for price.

OATS

Sow 70 to 100 Pounds per Acre

Texas Red (Rust Proof)—This is the only variety that is profitable to plant here. We have this on hand during the planting season.

Texas Red Oats—Grown in Texas.

Texas Red Oats—Grown in California. Write for prices.

WHEAT

Sow 50 Pounds per acre.

Defiance One big drawback against growing wheat in California has been rust, but this has been largely overcome by planting the Defiance variety where cool, moist weather conditions prevail. This variety is practically rust-proof.

Defiance is a late wheat and should be planted early and seeded thin. It is non-shattering and classed as a hard white wheat, and number one for milling.

Sonora This variety is recommended because of its large yield, earliness and drought resistance. It is susceptible to rust and inclined to shatter, but it has long been a standard variety in Southern California back from the coast. It is classed as a soft white wheat.

Early Baart Early Baart Wheat is the right variety for the interior valleys. Favorable reports have come from San Joaquin and Imperial indicating that this variety will yield 20 sacks per acre under dry conditions that would impair with other crops.

More acreage will be planted to this variety because it is no longer an experiment; it has demonstrated that it will out-yield other varieties for dry farming.

Russian Flax Will undoubtedly grow as luxuriantly in the Imperial and San Joaquin Valleys as it does in San Luis Obispo County, where it is at its best, and yields about two tons of seed per acre. Sow 40 pounds of seed per acre. It requires the same culture as barley. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

RICE

If interested write to U. S. Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 688, and Circular No. 97.

The variety now accepted as the best for California, is the Wataribune, an early variety imported from Japan.

(Per lb. 25c) (10 lbs. \$2.00) postpaid.

Rice is now grown in such widely distributed territory throughout California that it is evident we have the climate and it is only a matter of local condition. Therefore, if you have clay hard-pan soil with duck-ponds and tule, just grade it so it can be flooded, and sow rice. Apparently the more alkali the better.

To grow rice successfully necessitates a pond or reservoir that the water may attain a higher temperature than is usual for fresh water, when applied to the rice field.

RYE

Sow 60 Pounds per Acre.

Although Rye is sown largely for early winter pastures, green manuring and a limited acreage for the straw, it should be grown more largely for the grain, which is now in great demand.

Rosen Rye Each head fills four complete rows of grain. The grains are much larger than of common rye and the yield per acre is 35 to 40 bushels while 15 bushels per acre is all that may be expected of common rye.

Another season has demonstrated that Rosen Rye is better than the common winter rye, therefore plant the best. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

BROOM CORN

Grow more Broom Corn, but first make a contract with one of the factories to buy your crop. Unless you are familiar with growing it, first try a small acreage. Ask for our circular on Broom Corn.

Dwarf Evergreen This is the standard because it is easily harvested and in quality there is none better. It is the best to plant throughout the Southwest.

BUCKWHEAT

Common The soil is always moist where shaded with buckwheat. Sow the seed any time after April 1st, about 45 pounds per acre. Within ten weeks it will have matured. It will not survive the winter. Therefore it is necessary to sow once a year.

We highly recommend the growing of Buckwheat for reclaiming desert land, as it will start a growth and produce a crop under more adverse conditions than any other crop we know of.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Quantity price on application.

COTTON

Pure Pedigreed Seed All the seed we offer will have the approval of the proper horticultural inspectors. Therefore, you need not hesitate to order our seed. Write us stating what variety you want. We will then quote the price giving a pedigree of the seed offered, and the place where it was grown.

We offer the following varieties: Durango, Pima, Acala. Write for price.

TOBACCO

Grow your own smoking tobacco

Poultrymen, grow tobacco for your hen houses

If interested consult us about the culture. One ounce of seed is sufficient to plant an acre.

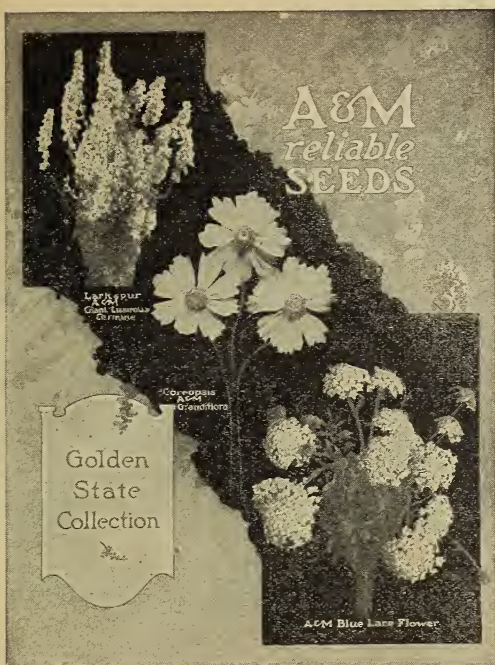
Pennsylvania Broad-leaf The largest known variety. At our demonstration plot we grew leaves that measured 40 inches long, 28 inches wide. In Pennsylvania this variety developed leaves 44 inches long and 36 inches wide. It is the best variety to grow in the home garden for use in the chicken house or other insecticide purpose. Also if handled properly makes a good smoking tobacco for the pipe. (Pkt. 10c) (oz. 50c)

Acclimated Havana For quality this is the very best. (Pkt. 10c) (oz. 50c)

Tobacco Culture in California

It is true we can grow tobacco just as luxuriantly in California as elsewhere. It has been repeatedly tried in various sections of the state but at no place did the experiment extend to the third year. California cannot cure a fine grade of tobacco. The cause may be our lack of rain to wash off the gum or it may be the dry atmosphere, or our lack of frost.

However, a fairly good smoking tobacco is made by carefully drying the leaves in a shed.



Golden State Collection

This wonderful collection of improved large flowering annuals will please you. Illustrated on back cover.

For a striking show in the garden and for cutting purposes this collection of pretty and easily grown flowers will be found very satisfactory.

Plant them in the open ground during the spring season and you will be rewarded with a most wonderful display of blooms with a wide range of color. The flowers included in the Golden State Collection lend themselves to many uses. They may be planted among shrubs, in open beds or used as border beds, all with artistic results.

The Golden State Collection consists of:—

- 1 Pkt. Larkspur—A & M Giant Lustrous carmine.
- 1 “ Coreopsis—A & M Grandiflora.
- 1 “ A & M Blue Lace Flower.
- 1 “ Zinnia—A & M Dahlia Flowered.

50c. Postpaid.

List of Flower Seeds for Special Purposes

There are no more satisfactory flowers than those grown from seed, especially the easily grown and brilliant flowered annuals. The beautiful shrubs and lilies, of course, have their place, but are far more expensive than a paper of seed which will furnish a large number of plants with usually enough for one's garden and some to spare.

This page is intended to aid you in the selection of your seeds that you may have flowers all the year round, and for every purpose.

Tender or Greenhouse means the plant will not stand the least frost. All such must be planted late in spring (May) or in a greenhouse.

Half Hardy means the plant will stand any light frost, but needs protection against very cold weather. These should be planted in the spring (March and April), not in the fall.

Hardy means the plant will stand considerable frost, or practically all we have on the Pacific Coast. These may be planted in the fall or in the spring (October to May). If sown in the fall they will come into bloom earlier than if sown in spring, even if the plants do not make much progress during the cold weather.

Annuals are plants that bloom in the first year from seed, and the plant dies after one season. Tender annuals must be sown in spring (April to June) and hardy annuals may be sown in either spring or fall (October to May).

Biennials are plants that bloom the second year from seed, and plant dies after blooming. In California many of these will bloom the first year if sown early. Sow under same conditions as perennials.

Perennials are plants that bloom the second year from seed, and the plant lives and blooms during successive years. If sown in early spring (February to April 15) many perennials will bloom the first year from seed. Tender and half-hardy perennials are best sown in spring after frost is over (April 15 to June). Hardy perennials are best sown in the late summer and early fall (July to October) for next year's flowers.

FLOWERING ANNUALS, ALSO SOME PERENNIALS WHICH FLOWER FIRST SEASON FROM SEED

Varieties Marked * Are Best for Beds and Masses

Abronia, Acroclium, Ageratum*, Alyssum*, Antirrhinum*, Arctotis, Asters*, Balsam, Bartonla*, Begonia, Bellis, Brachycome, Calendula*, Calliopsis*, Candytuft*, Canna*, Carnation, Celosia, Centaurea*, Chrysanthemum (Annual)*, Cineraria, Clarkia, Convolvulus*, Cosmos*, Dahlia, Dianthus, Dimorphotheca, Escholtzia*, Gaillardia*, Geranium, Godetia*, Gomphrena, Gypsophila, Helianthus (Sunflower), Helichrysum, Hollyhock (Annual), Hunnemannia*, Kochia, Larkspur*, Linum, Lobelia*, Lupinus*, Marigold*, Matricaria, Mathiola, Mignonette, Mimulus, Myosotis, Mirabilis, Nasturtium*, Nemesis*, Nicotiana, Nigella, Pansy*, Petunia*, Phlox*, Poppy*, Portulaca*, Salpiglossis, Salvia*, Scabiosa, Schizanthus, Stevia, Stocks*, Sunflower, Sweet Peas, Verbena*, Vinca*, Viola Cornuta*, Zinnia*.

FLOWERING PERENNIALS FOR PERMANENT BEDS AND BORDERS

Agatheia, Antirrhinum, Aquilegia, Begonia, Bellis, Canterbury Bells, Canna, Carnation, Centaurea Candidissima, Coreopsis, Cyclamen, Daisy, Dahlia, Delphinium, Dianthus, Digitalis, Forget-Me-Not, Gaillardia, Geranium, Gerbera, Gypsophila, Heliotrope, Hollyhock, Hunnemannia, Lantana, Lobelia, Lupinus, Mimulus, Myosotis, Pentstemon, Petunia, Phlox, Poppy, Primula, Pyrethrum, Ricinus, Romneya, Rudbeckia, Salvia, Scabiosa, Shasta Daisy, Statice, Stevia, Sweet William, Verbena, Vinca, Viola, Wallflower.

FOR HANGING BASKETS AND WINDOW BOXES

Alyssum, Asparagus Sprengeri, Convolvulus, Candytuft, Coleus, Kenilworth Ivy, Lobelia Gracilis, Geranium, Nasturtium, Smilax, Thumbergia, Vinca Rosea, Pansy.

ORNAMENTAL AND FOLIAGE PLANTS

Amaranthus, Canna, Centaurea Candidissima, Coleus, Kochia, Pyrethrum, Ricinus.

FOR EDGING AND BORDERS

Ageratum, Alyssum, Asters (dwarf) Begonia, Bellis, Daisy, Candytuft (dwarf), Centaurea, Candidissima, Coleus, Dimorphotheca, Gomphrena, Kochia, Lobelia, Marigold (dwarf), Myosotis, Nasturtium, Pansy, Phlox Drummondii, Pyrethrum, Viola, Zinnia (dwarf).

FRAGRANT FLOWERS

Abronia, Alyssum, Centaurea, Carnation, Clematis Paniculata, Centaurea Imperialis, Cyclamen, Dianthus, Heliotrope, Honeysuckle, Mathiola, Mignonette, Mimulus, Nicotiana Affinis, Pansy, Scabiosa, Stocks, Sweet Peas, Sweet William, Violet, Wallflower.

CLIMBING PLANTS

Annuals—Balloon Vine, Balsam Apple, Balsam Pear, Canary Bird Vine, Cardinal Climber, Convolvulus, Wild Cucumber, Cypress Vine, Japanese Hop, Hyacinth Bean, Ipomoea, Japanese Morning Glory, Mina Lobata, Nasturtium, Scarlet Runner, Sweet Peas, Thumbergia.

Perennial—Ampelopsis, Asparagus Plumosa, Australian Pear Vine, Bignonia, Clematis, Cobia, English Ivy, Honeysuckle, Lathyrus, Moon Vine, Passiflora Edulis, Smilax, Wisteria.

FOR CUT FLOWERS

Acroclium, Antirrhinum, Asters, Candytuft, Carnation, Arctotis, Brachycome, Calendula, Calliopsis, Celosia, Centaurea, Chrysanthemum, Coreopsis, Cosmos, Dahlia, Daisies, Delphinium, Dianthus, Gaillardia, Gerbera, Hunnemannia, Larkspur, Lupinus, Marigold, Matricaria, Mignonette, Pentstemon, Poppies, Pyrethrum, Salpiglossis, Salvia, Scabiosa, Schizanthus, Statice, Stevia, Stocks, Sunflower, Sweet Peas, Zinnias.

FOR SHADY PLACES

Anemone, Antirrhinum, Aquilegia, Begonia, (tuberous), Bellis, Daisy, Cineraria, Cyclamen, Delphinium, Scarlet Flax, Foxglove, Mimulus, Myosotis, Ceanothera, Pansy, Primula, Viola, Violets and Ferns.

FLOWER SEEDS

SEE INSIDE BACK COVER



A SEED FIELD OF A & M ASTERS

ABRONIA (Sand Verbena)

A hardy annual, trailing in habit, about nine inches high, bearing verbenalike clusters of flowers, which are very fragrant. A native of California. Thrives in dry situations, and is valuable for rock work or hanging baskets.

Umbrellata—Rosy lilac. Pkt. 10c.

ACONITUM WILSONI (Monk's Hood)

A hardy perennial especially recommended for growing in shady places or among shrubbery. Produces handsome long spikes of blue flowers and grows in any good garden soil. Height 3 to 4 ft. Pkt. 10c.

ACROCLINIUM

Hardy annual everlasting flowers, white and self pink with golden centers. Should be cut the first day they open.

Double Rosea—Bright pink. Pkt. 10c.

Double Mixed—Pink and white. Pkt. 10c.

AGATHEA

Sometimes referred to as the Blue Marguerite. Plants dwarf and compact, covered throughout a long season with myriads of small Blue Marguerite-like flowers. These are splendid for cutting purposes. Pkt. 10c.

AGERATUM (Floss Flower)

A hardy annual of easy culture, especially valuable for bedding, as it is literally covered with blossoms all summer. Sow the seed early in the spring, either in boxes to transplant, or out of doors, and thin to four to six inches.

Blue Perfection—Deep blue, one foot high. Pkt. 10c.

Imperial Dwarf White—One foot high. Pkt. 10c. Mixed. Pkt. 10c. ¼ oz. 25c.

ALYSUM

A fragrant hardy annual having the odor of honey and bearing spikes of small white flowers in great profusion throughout the winter, spring and summer. Without a doubt the best white border plant, is also useful for beds and baskets and will begin to bloom when quite small.

Carpet of Snow—Very compact, growing about three inches high, one plant often having a diameter of 15 inches. Pkt. 10c. ¼ oz. 25c.

Little Gem—Grows 4 to 6 inches high. One of the finest for low beds and borders. Pkt. 10c. ¼ oz. 25c.

Sweet White—The tallest of this group, growing 8 to 12 inches. A profuse bloomer. Pkt. 10c. oz. 30c.

Lilac Queen—A delicate lilac. Pkt. 10c. ¼ oz. 25c.

AMARANTHUS

Hardy annuals, grown especially for their brilliant foliage.

Caudatus (Love Lies Bleeding)—Light yellowish-green foliage; long, drooping crimson flower spikes. Plants grow three feet high. Pkt. 10c.

Sunrise—The most brilliant variety, large bronze red foliage growing on branches from 3 to 6 ft. tall. The foliage at the end turning a brilliant scarlet. Pkt. 15c.

Salicifolius or Willow-leaved—This variety is like the above except that the foliage is fine, giving a drooping, graceful effect. Pkt. 10c.

Tricolor (Joseph's Coat)—The leaves of this variety are green, red and yellow. Pkt. 10c.

AMMOBIUM

Hardy annual everlasting flowers. Pure white and very double. Pkt. 10c.

AUSTRALIAN PEA VINE (Dolichos Lignosus)

A rapid growing evergreen climbing perennial, flowering freely in large clusters of rose flowers. For covering arbors, trellises, etc., they have no superior. Pkt. 10c.



Columbine

AMPELOPSIS

Quinquifolia (Virginia Creeper)—A very popular climber. Hardy perennial. Seed may be sown any time of the year. During the summer the foliage is green changing to various shades of bronzy red during the fall. Pkt. 10c.

Veitchi (Boston Ivy)—A valuable perennial climber which grows rapidly, clinging to brick and wood. The leaves are deep green, changing to scarlet in the fall. Pkt. 10c.

ANCHUSA ITALICA

Dropmore Variety—One of the best hardy perennials, growing 3 to 5 ft. high, and having long loose sprays of lovely forget-me-not-like flowers of a rich gentian blue. Is very free flowering, blooming over a long season. Pkt. 10c.

ANEMONE (Windflower)

Coronaria—This giant French poppy anemone is a perennial, producing lovely flowers in many colors. Fine for bouquets. Seed sown in the early spring will begin flowering in September. Pkt. 10c.

ANGEL'S TRUMPET

See Datura.

ASPARAGUS

Plumosus—A tender perennial for green-house or potted plant use, with long, fine, feathery foliage. The sprays when cut, retain their freshness in water from three to four weeks. Seeds start slowly and should be soaked in water before sowing. Pkt. 10c. 100 seeds 50c.

Sprengeri—A hardy variety. Used as a pot plant. Suitable in groups of potted flowers or in hanging baskets. Pkt. 10c. 100 seeds 45c.

AQUILEGIA (Columbine)

A hardy perennial, growing about two feet high and bearing an immense variety of colors on long, smooth stems.

Canadensis—An improved variety of scarlet and yellow. Pkt. 10c.

Coerulea (Rocky Mountain Blue Columbine)—Fine deep blue and white; long spurs. Pkt. 15c.

Long Spurred Hybrids Mixed—For cut flowers these long spurred hybrids are unexcelled. Profuse blooms, of almost every shade, borne on long graceful stems, make this variety one of universal admiration. Pkt. 15c.

White Spurred—Pure white with long spurs. Pkt. 15c.

Double Mixed—Pkt. 10c.

Single Mixed—Pkt. 10c.

A & M Popular Strains of Aster

A popular half-hardy annual produced in a great variety of classes, and an almost endless number of colors. The tallest grow about two feet high, and some varieties of dwarfs are not over eight inches high. The best method of culture is to sow the seed in boxes and transplant when large enough to handle. The seed can be sown, however, in the row where the plants are to remain, thinning them from six to twenty inches apart, according to variety.



Giant Branching Comet

Heart of France—A rich dark red. The richest, most striking color and not to be found in any other aster. The plants grow about 2 feet high and are of a branching habit. Pkt. 25c.

EARLY FLOWERING

Queen of the Market, Mixed—One of the earliest blooming varieties, blossoming frequently in July. Of spreading habit, 12 to 15 inches high. Blossoms medium sized, and the petals curve outward. The best variety for bedding or edging. Pkt. 10c. ¼ oz. 35c.

American Beauty—A wonderful new free branching Aster with very long stems. The plants are about 2 to 3 ft. high. The stems are stout and 18 to 24 inches long. The flowers are large and well formed. We heartily recommend this as the best florist variety.

Carmine Rose, Lavender, Purple, September Beauty (Shell Pink)—Mixed. Pkt. 25c each. ¼ oz. 80c.

A & M Quilled—An old favorite which has become popular again. The quilled petals give a pompon effect and the flowers often measure 3 inches across. Its keeping qualities excel all other varieties. A variety which retains its bloom and color beyond the time of other popular sorts. Mixed. Pkt. 10c.

A & M Dwarf Bouquet—A compact and free flowering variety which is admirably adapted for edging and carpet bedding. Height 1 ft. All colors mixed. A strain recommended as a border variety, being exceptionally dwarfed. Pkt. 10c.

A & M Mignon (Pompon)—One of the daintiest and most attractive varieties of Asters. The bright colored flowers are small, about ¾ to 1 inch in diameter and are produced in great profusion. Excellent for cutting and bedding. Mixed. Pkt. 10c.

A & M Single Asters—Single Asters make splendid bedding, border and cut flowers. They resemble daisies, and in this mixture are shades of pink, blue, lavender, rose. The flowers keep well in water when cut. Pkt. 10c.

MID-SEASON FLOWERING

Ostrich Feathered—Extremely graceful Aster, with large, loose, feathery heads, unrivalled for table decoration, flowers double and semi-double. The branching habit makes this a conspicuous border plant. Height, 18 inches.

Crimson Rose Pink Dark Blue Shell Pink Light Blue White
Pkt. 10c. Separate colors, ¼ oz. 60c.
Mixed, ¼ oz. 55c.



American Beauty

LATE FLOWERING

Giant Branching Comet—The plant grows 24 inches high and about 18 inches in width and the blossoms, which are large and full-petaled, are borne on long stems or branches.

Crimson Rose Pink Dark Blue Shell Pink Light Blue Lavender
Pkt. 10c. Separate colors, ¼ oz. 50c.
Mixed, ¼ oz. 45c.

American Branching—An excellent variety, the plants are 2½ to 3 ft. high and have a branching and vigorous growth. The flowers are well formed, being large, double and incurved.
Lavender Purple Peerless Pink Black Blue Deep Rose Crimson White
Separate Colors, Pkt. 10c. ¼ oz. 50c;
Mixed, Pkt. 10c, ¼ oz. 40c.

A & M Antirrhinum—Snapdragon

Our improved strains of these have proven one of the most attractive outdoor bloomers. Planted in the spring they will be a riot of bloom all summer and if cut back late in the fall will bloom all winter. Be sure to include these in your garden.

Tall Large Flowering

This type grows about 3 ft. tall, the flowers are large and the flower spikes long. Splendid for cutting and tall borders.

Fire King—A brilliant scarlet orange variety. Pkt. 10c.

Golden King—Long spikes of showy yellow flowers which remain in bloom the whole of the summer. Pkt. 10c.

Queen Victoria—Striking variety sending up numerous long spikes of pure white flowers. Excellent for cutting. Pkt. 10c.

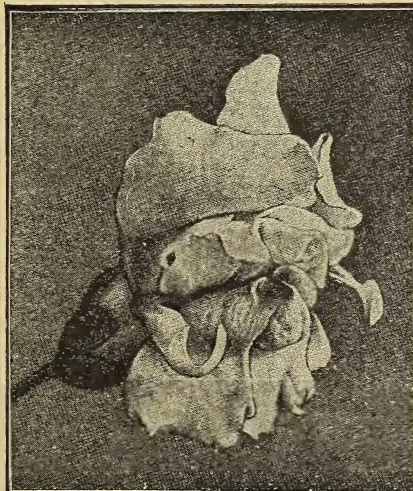
Rose Pink—A delightful shade of pure rose pink. Very vigorous and free-flowering. Pkt. 10c.

Silver Pink—A delicate pink with silver shading. Pkt. 10c.

Venus—Pink, with white throat. Pkt. 10c.

The above tall varieties are also offered in ¼ oz. 35c.

Mixed—Including all the new colors. Pkt. 10c. ¼ oz. 25c.



Antirrhinum or Snapdragon

Semi-Dwarf Large Flowering

The best for bedding and because of the large flowered compact spike is considered fine for cutting. Height about 18 inches.

Amber Queen—Amber suffused chamois. Pkt. 10c.

Crimson Queen—A deep velvety crimson. Pkt. 10c.

Defiance—A fiery scarlet. Pkt. 10c.

Diana—Soft rose pink with white tube. Pkt. 10c.

Fascination—A pearly pink. Pkt. 10c.

Golden Queen—A rich clear yellow. Pkt. 10c.

Prima Donna—Terra cotta pink, suffused primrose. Pkt. 10c.

Queen of the North—Pure white. Pkt. 10c.

The above separate colors ¼ oz. 45c.

Semi-dwarf Mixed. Pkt. 10c. ¼ oz. 35c.

Majus, Tom Thumb—An excellent mixture containing all shades of these showy flowers. Splendid for edging and showy display. Height 10 inches. Mixed—Pkt. 10c.



Arctotis Grandis

ARCTOTIS GRANDIS (African Lilac Daisy)

Large pearly white Marguerite-like flower, with delicate mauve center surrounded by a narrow golden band. The whole plant is covered with white down. Half hardy annual. Height 2 feet. Pkt. 10c.

BALLOON VINE (Love-in-a-Puff)

Climbing annual, with small flowers. The seed pods are curiously swelled or puffed and are quite attractive. Pkt. 10c.

BALSAM APPLE, BALSAM PEAR (Momordica)

A climbing annual, growing about 10 feet long. Has graceful and ornamental foliage, yellow flowers and warted golden yellow fruit, with large carmine seeds. Balsam Apple and Balsam Pear are climbers which thrive in hot locations, and are much planted around Bakersfield. Pkt. 10c. each.

BARTONIA AUREA

A showy California annual. Lovely large golden yellow flowers which glisten like satin in the sunshine. The height is about 18 inches, making them very desirable for bedding and cutting. Pkt. 10c.

BEGONIA SEMPERFLORENS

Very attractive flower for both pot and bedding use and should be more extensively grown for shady borders. Perennial. Pkt. 25c.

A & M DOUBLE DAISY (Bellis Perennis)

A hardy perennial, blossoming freely all spring and summer. Plant is about four inches high and is valuable for borders.

Extra Double Red—A variety of more recent introduction. Recommended as a border plant. Pkt. 15c.

Extra Double White, or Snowball—A clear white variety. Pkt. 15c.

Extra Double Pink—A beautiful shade of pink. Pkt. 15c.

Double Mixed—Pkt. 10c.

BOLTONIA

A hardy perennial. Very showy daisy like flowers produced in countless numbers from June until October. Height 4 ft. Pkt. 10c.

BRACHYCOMBE IBERIDIFOLIA (Swan River Daisy)

A charming annual deserving greater popularity. The plants, which grow about 10 inches high, are covered with Cineraria-like blooms in shades of blue and lavender. Mixed—Pkt. 10c.

A & M CALENDULA

Very hardy annual, one foot high, blooming freely practically the whole year round. It is one of the easiest culture and is desirable for rather inferior soils, where less sturdy flowers do not thrive. A medicinal extract resembling arnica is made from the flowers.

Orange King (New)—Bears giant flowers sometimes 3 inches in diameter. Color pure orange. Pkt. 10c. ½ oz. 25c.

Lemon Queen—Like the above, but of pure lemon. Pkt. 10c. oz. 25c.

Favorita—Large fine flowers of deep cream with the petals edged yellow. Pkt. 10c. oz. 30c.

Double Mixed—A good mixture of 8 or 10 different shades of yellow and orange; some clear colors and some shaded and striped. Pkt. 10c. oz. 25c.



A & M Balsam

BALSAM (Touch-Me-Not)

A tender annual, with brittle stems and foliage. Flowers both single and double, in bright colors and variations are wax-like and very attractive. The individual blossoms floating in a dish of water exhibit their beauty to the best advantage.

Improved Double Camella Flowered—In its extraordinary size, perfect form and brilliant colors, this fine strain of balsams surpasses all others. Height 18 inches. Pkt. 10c.

Rose Flowered—Handsome double flowers in form resembling a rose. Height 18 inches, fine mixed. Pkt. 10c.

Spotted—Large semi-double flowers well adapted for borders, fine mixed colors. Pkt. 10c.

CALLIOPSIS

These will grow luxuriantly in any situation and are most useful affording a constant supply of richly marked flowers for cutting. All varieties are annuals. The tall varieties often reach a height of three feet. The dwarf varieties make splendid borders and low beds, forming round compact bushes which are literally covered with bloom.

Crimson King—A rich deep crimson. Height 8 to 10 inches. Pkt. 10c.

Golden Wave (Drummond)—Large, rich, golden yellow flowers with chestnut-brown centers produced in abundance. Height, 18 inches. Pkt. 10c.

Radiata Tiger Star—The flowers are star shaped of rich red color; the end of each petal is spotted with golden yellow. Height 8 to 10 inches. Pkt. 10c.

Dwarf Compact Varieties Mixed—A splendid mixture of all the attractive varieties of this class. Pkt. 10c. ½ oz. 25c.

Tall Single Mixed—Contains all the choice tall single varieties. Pkt. 10c. oz. 30c.

Tall Double Mixed—These double and semi-double flowers have a graceful charming appearance. Pkt. 10c. ½ oz. 25c.

CANDYTUFT (Iberis)

A hardy annual, growing about 12 to 18 inches high, according to the variety. The blossoms are borne on long spikes, and the newer varieties are quite large flowering and very fragrant. Of easy culture and valuable for bedding or massing.

Crimson Pink Flesh Color
White Lilac Mixed
Pkt. 10c. Separate colors, oz. 40c. Mixed, oz. 30c.

Giant White Hyacinth Flowered—A giant Candytuft, bearing immense snowy white spikes, the blooms of which often measure 10 inches or more. Don't fail to give this a trial. Pkt. 10c.

Coronara Empress—Large trusses of pure white flowers, one of the finest candytufts yet raised. Pkt. 10c.

CANNA

A perennial growing 3 to 6 feet high. Suitable for bedding and back grounds. Plants have bright flowers and ornamental leaves. Soak seed in tepid water several hours before planting.

Crozy's Varieties—New large-flowered and free blooming variety. Height 3 ft. Mixed, Pkt. 10c.

Tall Varieties—Height 5 to 6 ft. Mixed, Pkt. 10c.

CANARY BIRD FLOWER (Tropaeolum-Canariense)

A tender, climbing annual of the nasturtium family. Blossoms have curiously winged petals and are light yellow. Pkt. 10c.

CALIFORNIA POPPY

See Eschscholtzia.

CARDINAL CLIMBER

A new annual climber of great merit, bearing a mass of small crimson flowers. Height 10 to 15 feet. Pkt. 15c.

CASTOR OIL BEANS

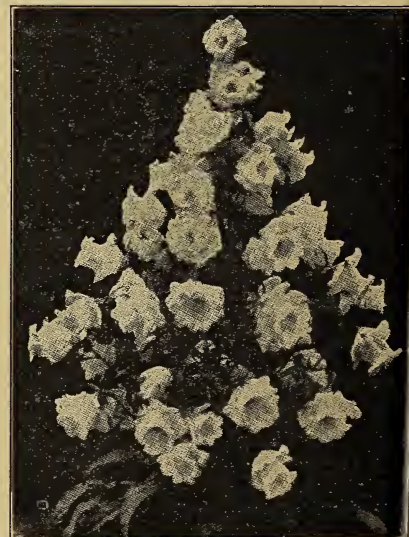
See Ricinus.

A & M CANTERBURY BELLS

Campanula Medium—A hardy perennial, blooming the second year from seed, or the first if sown early. Grows about three feet high.

Single Blue Single Rose
Single White Single Mixed
Pkt. 10c.

Double Mixed—Pkt. 15c.
Calycanthema—A variety of Canterbury Bells having large semi-double flowers each resembling a cup and saucer. Mixed—Pkt. 15c.



Canterbury Bells



Chabaud's Carnation

CARNATION

Our strain of these popular flowers is unsurpassable in beauty and variety of coloring; also in their delightful fragrance. Seed should be sown in pots or boxes and when 2 to 3 inches high, may be transplanted to the open bed or border, giving shade until the young plants have become established. Sow any time between March and September.

Chabaud's Everblooming French Mixed—A very popular strain, easily raised from seed, producing beautiful double flowers. Pkt. 15c.

Grenadin Scarlet—A valuable early-flowering variety coming quite true to color and producing an exceptionally large percentage of sweet scented double scarlet flowers. Pkt. 10c.

Marguerite Pure White—An exquisite sweet scented fringed flower of pure white color. Pkt. 10c.

Marguerite, Mixed Colors—This assortment gives a large percentage of fine double flowers. Pkt. 10c. ¼ oz. 50c.

CELOSIA PLUMOSA (Feathered Cockscomb)

Plumosa Mixed—A very fine selection of the popular feathered Celosia containing many pleasing shades of color varying from pale yellow to the deepest crimson. Pkt. 10c.

CELOSIA CRISTATA (Cockscomb)

Very ornamental and strong plants, producing magnificent combs of velvety looking flowers. They succeed well in the garden and make very attractive pot plants. Annual.

Dwarf Empress—A handsome strain, large and compact heads; color, splendid crimson. Height 10 inches. Pkt. 15c.

Dwarf Yellow—A variety producing flowers of an attractive hue. Pkt. 10c.

Dwarf Mixed—A mixture of rich velvety colors. Height 10 inches. Pkt. 10c.

Tall Crimson—Brilliant crimson combs borne on stems about 2 ft. tall. Pkt. 10c.

Tall Mixed—Contains shades of crimson and yellow. Height 2 ft. Pkt. 10c.

CELOSIA CHILDI (Woolflower)

A new annual of great merit. As the name suggests, the flower resembles huge balls of crimson wool. When cut, if it is hung head down until dry, makes a beautiful everlasting flower. Height 15 inches.

Yellow (New)—Dark Pink (New) Pkt. 25c each.

Crimson—Pkt. 15c.

CENTAUREA CYANUS (Corn Flower or Bachelor's Button)

This old fashioned hardy annual is still a great favorite for cutting purposes. The deep rich blue is the most popular. The mixtures contain shades of pink, white, lavender and blue.

Double White (New)—This is offered for the first time this year. It is absolutely pure white and is very double. A splendid cutting flower. Pkt. 15c.

Double Blue—A pleasing shade of blue but of much more substance than the single kind. Height 2 to 3 feet. Pkt. 10c. ½ oz. 35c.

Double Mixed—Pkt. 10c. oz. 40c.

Single Blue—The rich deep blue Bachelor's Button. Pkt. 10c. ½ oz. 35c.

Single Mixed—Pkt. 10c. oz. 30c.

CENTAUREA CANDIDISSIMA

True Dusty Miller—Broad silvery white foliage; useful for edging. Height 12 inches. Pkt. 10c.



Centaurea Imperialis

CENTAUREA IMPERIALIS (Royal Sweet Sultan)

This is the variety so popular in the florist's store. The plants are of spreading habit and one plant has been known to keep a home replenished with cut flowers during the entire summer. Height, 3 to 4 feet. A hardy annual.

White **Lavender** **Rose**
Purple **Mixed**
Pkt. 10c. Separate colors, ¼ oz. 35c.
Mixed, ¼ oz. 25c.

Suaevolens—Similar to Imperialis, but producing yellow flowers. Pkt. 10c. ¼ oz. 35c.

COREOPSIS (Lanceolata Grandiflora)

This is illustrated in color on the back cover of this catalogue. It is a hardy perennial bearing a profuse and long-continued succession of large, bold, golden yellow flowers during the spring and summer months. It is a splendid cut flower, the stems are long and the flowers keep well in water. Seed sown in the early spring will flower the same season. Seed may also be sown in the fall. Height 2½ ft. Pkt. 10c.

CHRYSANTHEMUM (Annual Varieties)

Painted Daisy (Carinatum)—These daisy-like flowers are red, yellow and white, with rings around the centers of contrasting colors. Very attractive flowers and especially valuable for cutting. Pkt. 10c. oz. 40c.

Crested or Double Painted Daisy—A new and most pleasing variation of the above; the double centers add to their gay appearance. A most satisfactory flower to grow. Pkt. 10c. ¼ oz. 25c.

Double Annual (Coronarium)—A showy double flower in white and yellow shades. They are spring and summer bloomers and do not resemble the fall perennial chrysanthemum. Pkt. 10c. oz. 30c.

(Perennial Varieties)

These are the hardy perennial varieties which flower in the fall and are usually propagated from cuttings. There is much pleasure in growing these from seed, the percentage of doubles is good and many novelties often result.

Indicum or Chinese—The large incurving variety. Pkt. 25c.

Japonicum or Japanese—The petals of this variety are long and twisted. Pkt. 25c.

Nanum or Pompon—The small button-like variety so popular for cutting. Pkt. 25c.

CINERARIA

A tender perennial grown principally in the greenhouse, but can also be grown in sheltered spots in the open ground. Appreciated for its brightening effect during the winter months.

Hybrida Large Flowering, Semi-Dwarf—A splendid strain of compact growth with large heads of flowers. Each individual flower is large and there is a wonderful variation of colors. Splendid for growing in pots. Height 1 ft. Pkt. 35c.

Hybrida Large Flowering Tall—A tall variety often growing 18 inches high. The flowers like the above are large and have a wide range of colors. Pkt. 35c.

Hybrida Mixed—A good strain of large brilliant colored flowers, especially good for outdoor bedding. Pkt. 25c.

CLEMATIS

A very fine hardy climber; leaves bright and glossy green; flowers small and hawthorne scented, and just covering the plant when in bloom. Excellent for covering trellises or fences. Pkt. 10c.

Paniculata—White, Pkt. 10c.

Hybrids Mixed—Attractive shades of purple, lavender, white, etc. Pkt. 10c.



Coreopsis Lanceolata



Anemone Flowered Cosmos

A & M GIANT FLOWERED COSMOS

Cosmos—An annual with fine-cut feathery foliage and large, showy blossoms. Cosmos are now divided into 2 distinct classes, the early and late varieties. The early flowering may be planted from early spring to late fall. The late flowering should be planted in late spring and summer for fall blooming. Plant out in the open where the flowers are intended to bloom. They are easily grown, make a fine showing and are wonderful cut flowers. No California home should be without A & M Giant Flowered Cosmos.

Early Mammoth Flowering—An improved early type which blooms 60 to 75 days after planting. The plants reach a height of 2 to 3 ft. The flowers are large and the stems long enough for cutting. A fine all year flower.
 Pink 10c each, 1/2 oz. 30c. White
 Crimson
 Mixed—Pkt. 10c, 1/2 oz. 25c.

Late Giant Cosmos—This variety should be planted in late spring and summer for fall blooming. The plants often reach a height of six feet and

make a splendid background. One may have a wealth of bloom from a few plants and they are excellent cut flowers.

Pink White Crimson
 Lady Lennox Pink Lady Lennox White
 Mixed—Pkt. 10c each.
 Separate Colors—Oz. 30c.
 Mixed—Oz. 25c.

Crested or Anemone Flowered Cosmos
 This variety has a decidedly double center with outer guard petal as

shown in the above cut. This is made from an actual photograph of these flowers. This is a late blooming Cosmos and grows about 5 ft high. A lovely variety. Pkt. 15c.

Double Cosmos—We have secured a small amount of seed of these beautiful double Cosmos. This is one of the finest of recent novelties and most exquisite of all for cut flowers.

Double Pink Double White
 Double Crimson
 Double mixed. Pkt. 25c. each.

COBEA SCANDENS (Cup and Saucer Vine)

A perennial climber of rapid growth; very valuable for covering trellises, arbor, trunks of trees, etc. Will cling to any rough surface, often attaining a height of 30 to 40 feet in one season.

Scandens Alba—White. Pkt. 10c.
 Scandens Purpurea—Large bell-shaped purple flowers. Pkt. 10c.

COIX LACHRYMAE (“Job’s Tears”)

Curious ornamental grass with broad corn-like leaves and seeds of a light slate color. Valuable for winter bouquets with everlasting flowers. Strings of handsome beads are made from the seeds. Hardy annual; three feet high. Pkt. 10c. oz. 30c.

COLEUS

Perennial. These beautiful and ornamental foliage plants, producing the most attractive colors, are a most interesting subject to grow from seed. To watch the foliage change into a variety of colors as it grows day by day, is wonderful.

Extra Choice Mixed—Pkt. 25c.
 Choice Mixed—Pkt. 15c.

CLARKIA

A hardy annual of easy culture, growing about 18 inches high and flowering in great profusion. Native of California. Seed sown in the fall will give early blossoms in the spring. Seed may also be sown in the spring and summer. Will grow in shade or sun.

Double Mixed—The long sprays of bloom resemble sprays of peach blossoms and are very showy. They make beautiful cut flowers and may be had in lovely shades of pink, rose, salmon, etc. Pkt. 10c.

Double Brilliant—Bright pink.
Double Chamois—Pink suffused with cream.

Double Salmon Queen.

Double Scarlet.

Single and Double Mixed—Pkt. 10c.

CYCLAMEN

A tender, bulbous perennial, used in greenhouses and window gardens. It is easily grown from seed. Sow in the fall or early spring.

Persicum Giganteum—Flowers of extraordinary size. The leaves are proportionately large, marked with silver-grey. Extra choice mixed. Pkt. 35c.

Rose White Mixed Pkt. 25c.

CYPRESS VINE

(Ipomea Quamoclit)

A tender climbing annual with soft fernlike foliage and small star-like flowers. Choice mixed colors. Pkt. 10c.

SHASTA DAISY

Daisy, Shasta Daisy—A fine perennial plant bearing large white single blossoms, with yellow centers.

Alaska—The finest. Pkt. 15c.
 Ordinary—Pkt. 10c.



Shasta Daisy

DAHLIA

Although not generally known Dahlias are easily grown from seed. If planted early in a hot bed and transplanted when danger of frost is past they will bloom the first season and make large bulbs by the next fall.

Cactus—Our mixture contains many of the recent novelties. Giants with pointed petals.

Extra Choice Mixed—Pkt. 25c.
 Choice Mixed—Pkt. 15c.

Pompon Choice Mixed—These popular little Dahlias may also be grown quite readily from seed. They are vigorous growers and tremendous bloomers. Pkt. 15c.

Double—Choice mixed colors in great variety and flowers of excellent form. Pkt. 15c.

Single Mixed—Seed saved from the choicest varieties. Pkt. 10c.

DIGITALIS (Foxglove)

A hardy perennial, blooming the second year from seed. Grows usually about 3½ feet, although in very rich soil sometimes 6 feet. The bell shaped flowers are borne on long spikes, and come in shades of purple, lavender, rose and white, all spotted lightly inside the blossom. Thrives best in cool, shady locations. Fine Mixed—Pkt. 10c.

DOLICHOS OR HYACINTH BEAN

Tender, climbing annual. Grows rapidly and is valuable for covering a trellis. Flowers in purple or white. Sow seed in open ground late in April.

Lablab—Mixed. Pkt. 10c.

A & M CALIFORNIA POPPY



Eschscholtzia California Poppy

NEW COLORS IN CALIFORNIA POPPIES

Orange Flame—Vivid orange-scarlet and most striking of all the new colors. The plants are very erect and compact and would do for borders. Pkt. 25c.

Ballet Girl—The outside of the petals is an intense carmine, the inside a light cream, making a contrast of colors both beautiful and startling. Pkt. 25c.

Tango—A bronzy red overlaid terra cotta. This variety was introduced last year and found immediate favor. Pkt. 25c.

Mauve Beauty—An entirely new color. Is a beautiful shade of pure mauve. Pkt. 25c.

Lovely—True to its name this variety is a bright rose pink suffused with salmon. The blooms have a satiny appearance which adds much to their loveliness. Pkt. 25c.

The Geisha—The inside of the petals is a brilliant gold and the outside orange-crimson. The petals are fluted, which

ESCHSCHOLTZIA (California Poppy)

Hardy annual. Seed may be sown from October until April. Fall sown seed will bring large early flowers.

Some wonderful new varieties have been produced recently. Remarkable color combinations which make striking beds and splendid cut flowers. California Poppies have a long blooming season which may be prolonged by cutting off the seed pods.

Standard California Poppies

California Yellow—Bright yellow. Pkt. 10c.

California Deep Orange—True California Poppy. Pkt. 10c.

California White—A re-selected pure white. Pkt. 10c.

California Golden West—Yellow with orange center. Pkt. 10c.

California Crimson—Carmine Crimson. Pkt. 10c.

California Chrome Queen—Clear amber yellow. Pkt. 10c.

California Mixed—A mixture of all the above colors. Pkt. 10c.

makes the open flowers very attractive. Pkt. 25c.

Scarlet Beauty—The brightest color of all, being a deep scarlet and as the plants are erect and the flowers large it gives the effect of vivid scarlet tulips. Pkt. 25c.

Extra choice mixed—Contains the above also many other of the newer colors. Pkt. 15c.

Collections of the above seven named and one mixed variety \$1.50.

DELPHINIUM (Perennial Larkspur)

Beautiful, hardy border perennials with noble spikes of handsome flowers; very useful for cut flowers, etc. Sow in the spring or early fall in seed beds or boxes and transplant when large enough.

Belladonna—A lovely turquoise blue, which is a continuous bloomer. Splendid for cutting. This is the tall Delphinium so often seen in beds and borders and as cut flowers in the florist shops. Pkt. 25c.

Bellamosa—A rich deep blue in color and of the same type and habit of growth as the Belladonna. The two grow beautifully together. Pkt. 25c.

Azure Fairy—A lovely azure blue Delphinium flowering from the seed the first season if the seed is sown in early spring. The height is twelve to eighteen inches. May be used for bedding, borders and cut flowers. Pkt. 10c.

Blue Butterfly—A fine dark blue of the same type as Azure Fairy with which it is often grown. Pkt. 10c.

Gold Medal Hybrids—The finest hybrids to be found in Delphinium and all the lovely blues, lavenders and mauves are in this mixture. The plants are vigorous growers, producing tall, handsome spikes. Pkt. 15c.

Hybrids Finest Mixed—A very pleasing mixture which blooms the first year from seed if sown in early spring. Pkt. 10c.

DIANTHUS OR PINKS

Hardy annuals, about 1 foot high, and bearing beautifully colored single and double blossoms in profusion all summer. Sow seed early in boxes and transplant, or sow in rows where the plants are to remain, and thin. They are largely used for border, massing in beds and for cutting. There is a wide range of colors from purest white through all shades of pink to deepest red.

Double Annual

Chinensis Double Mixed.
Heddewigi, Double Mixed, Pkt. 10c. ea.

Single Annual

Heddewigi, Single Mixed, Pkt. 10c.

Perennial

Plumarius (Grass Pink)—A hardy perennial pink used for borders and cutting and producing a constant bloom of flowers of varied hues.

Double Grass Pink, Mixed. Pkt. 10c.
Single Grass Pink, Mixed. Pkt. 10c.

DIDISCUS COERULEUS (Blue Lace Flower)

This beautiful lace flower is illustrated on the back cover of this catalog. It is a very attractive cut flower of a lovely blue shade and is most effectively used when mixed in bouquets. The culture is easy and being a hardy annual may be planted from early spring to late summer. If you like to raise your own cut flowers you will be glad to have this in your collection. Pkt. 15c.

DIMORPHOTHECA

(The Golden African Daisy)

A showy annual from South Africa which has become a great favorite on account of its easy culture and beautifully colored flowers. The colors include all shades of yellow, orange, cream and white and massed in beds or wide bor-

ders they have a very brilliant effect. They may be planted during the fall, spring or summer.

Aurantiaca—Brilliant orange. Pkt. 10c.

Hybrids, Mixed, all colors. Pkt. 10c.



Dimorphotheca Aurantiaca



Gaillardia

DUSTY MILLERSee *Centaurea Candidissima*.**EVERLASTING FLOWERS**See *Acroclinium*, *Ammobium*, *Gomphrena*, *Helichrysum*, *Statice*, *Rhodanthe*, *Xeranthemum*.**EVERLASTING PEAS**See *Lathyrus Latifolius*.**FLAX**See *Linum*.**FLOWERING SAGE**See *Salvia*.**FOUR O'CLOCK (Mirabilis)**

A hardy annual of easy culture, growing about 2 feet high. The plant is free flowering, bearing blooms of a great variety.

Mixed—Pkt. 10c.

FOXGLOVESee *Digitalis*.**FORGET-ME-NOT**

(Myosotis)

A hardy perennial with small blue star-like flowers borne in clusters on long stems. Will bloom the first year if sown early and does best if sown in a box and then transplanted to a cool moist situation.

Alpestris—Light blue flowers, strong, long stems and vigorous growers make this a popular variety. Pkt. 10c.*Victoria*—Large flowers; bright azure blue with yellow center; plant symmetrical, dwarf and strong power. Pkt. 10c.**GEUM**

A beautiful hardy perennial producing flowers in profusion from spring till fall. It is an excellent cut flower, having long stems and keeping well.

Coccineum—Deep crimson. Pkt. 10c.*Mrs. Bradshaw's Double Red*—Large bright orange-scarlet double flowers. Pkt. 15c.

Gerbera

GAILLARDIA

Beautiful show plant, remarkable for the profusion, size and brilliancy of its flowers, continuing in bloom from early summer till late in the fall. Excellent for beds, borders, or for cutting. Should be sown where they are to bloom, height 18 inches.

Grandiflora—Single perennial variety of varying shades of reddish brown and yellow. Pkt. 10c.*Picta Lorenziana Double Mixed*—Large heads of bright yellow and red flowers. Very double, with quilled petals, suitable for bouquets. Pkt. 10c.**GERANIUM**

A half-hardy perennial, flowering the first year from seed if sown early. A gorgeous flower of numerous shades of color; bearing continuously renders this one of the most popular plants grown.

Large Flowers of Fancy Show—This choice mixture includes many of the newest and finest sorts. Pkt. 25c.*Lady Washington Mixed*—A very popular variety of geranium. The flowers are particularly beautiful. It is very interesting to grow from seed, many extra choice varieties are often obtained. Pkt. 25c.

Helichrysum

HELICHRYSUM (Straw Flower)

A free-flowering, hardy annual, growing four or five feet high and bearing beautiful straw-like flowers in a great variety of shades and colors. The following are the most popular strains of this well-known flower offered in separate colors:

Salmon Queen, *Silver Ball*, *Golden Ball*, *Fireball*, and *Violet*. Pkt. 10c. 1/4 oz. 25c.

All Colors Mixed—Pkt. 10c. 1/2 oz. 35c.

HELIANTHUSSee *Sunflower*.**GOMPHRENA**

Entirely different in appearance from any other everlasting flower, and very attractive. Has a globe-shaped flower. Mixed Pkt. 10c., 1/2 oz. 25c.

GERBERA (New Hybrids)

Large daisy-like blossoms with flower stems rising to a height of about two feet. Colors range from white to crimson, pink, rose, yellow and lilac shades. Flowers both summer and winter. Start carefully under glass and grow in a sandy, well drained soil if possible. Pkt. 25c.

GODETIA

A hardy annual, 15 inches high, of compact growth, satiny cup-shaped flowers in deep red, pink and white, shaded and blended. Valuable for bedding. Sow seeds early in the year.

Dwarf Mixed—Pkt. 10c.

Tall Mixed—Pkt. 10c.

Tall Double Mixed—A new variety of Godetia of a tall branching habit of growth. The flowers are borne in great profusion along the stems and have the same stately luster of the single kind. Are very attractive when used as cut flowers. A choice mixture. Pkt. 10c.

GYPSOPHILA**(Baby's Breath)**

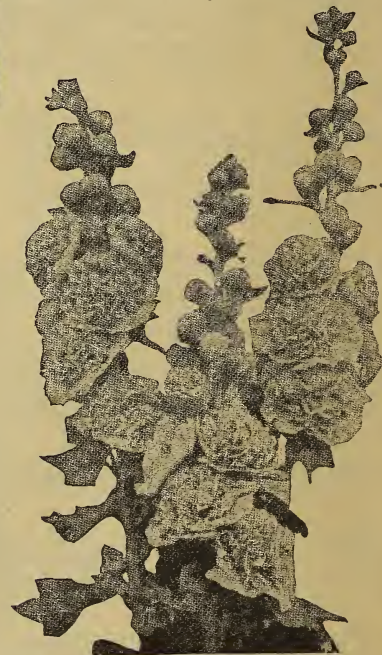
A hardy annual of easy culture. Grows two or three feet high, and bears a profusion of small star-shaped white or pink flowers.

Elegans—Annual white. Very largely grown by florists for use in bouquets. Pkt. 10c, oz. 25c.*Elegans Carmine*—A recent introduction of a deep carmine. Pkt. 10c., oz. 30c.*Paniculata*—Fine for bouquets; white flowers perennial. Pkt. 10c.**HELIOTROPE**

A half-hardy perennial growing four to eight feet high. Small flowers, borne in graceful clusters and very fragrant. Blooms the first season from seed if sown early. Forms a large plant and requires a roomy situation.

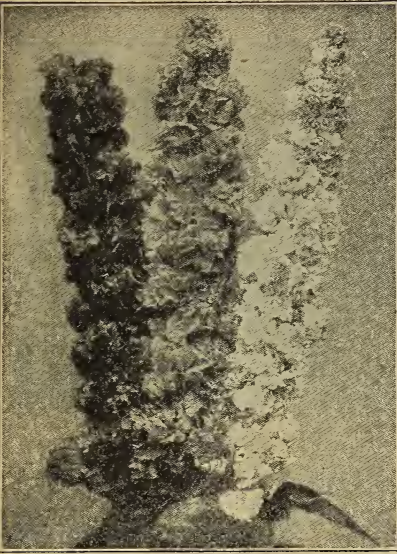
Finest Mixed—A mixture of the ordinary true types in shades of white, mauve and purple. Pkt. 10c.**A & M HOLLYHOCKS**

A hardy perennial of upright, stately growth, five to eight feet high, unequalled for a background or covering ugly places. Seed sown in seed beds or boxes in the spring, may be planted out when large enough and will bloom the following year. The following are saved from large double-flowering varieties:

Double Maroon, *Double Scarlet*, *Double Yellow*, *Double Pink*, *Double White*, *Double Mixed*. Pkt. 10c.*Perennial Single Mixed*—Pkt. 10c.*Allegheny*—This unique and beautiful variety produces semi-double flowers about 3 inches across. The petals are crinkled and fringed like crumpled and slashed satin. Pkt. 10c.*New Annual Mixed*—A new departure in Hollyhocks. Seed sown in the Spring will bloom the first year. Pkt. 10c.

A & M Double Hollyhock

A & M LARKSPUR



A & M Larkspur Mixed

Are the finest strains and produce a wonderful show in any garden. The double flowering varieties, with their long spikes, are excellent for cut flowers. They should be planted in beds, or as a back ground for other small plants. With the great variety of colors one may carry out most any color scheme desired, and the bright shades will add a touch of beauty to the garden that will be a pleasure to note. They are easily grown and we know of nothing that will produce a greater show. By all means include a general assortment of A & M Larkspur in your garden for early spring blooming.

Lustrous Carmine—This is beautifully illustrated on the back cover of this catalog. The glowing color, large individual flowers set closely together in a spike and long graceful stems makes this an ideal cut flower. A recent introduction. Pkt. 10c.

Exquisite Pink—An entirely new color in Larkspur being a lovely light pink. It holds its color well and has all the fine qualities of tall double larkspur. The supply of seed is quite limited. Pkt. 25c.

Light Blue—A clear light ageratum blue. Pkt. 10c.

Dark Blue—A rich deep blue. Pkt. 10c.

Lilac—A soft lilac. Pkt. 10c.

White—An improved pure white. Pkt. 10c.

Mixed—A Choice mixture. Pkt. 10c.

LANTANA

Tender perennial, growing from 3 to 5 feet high, bearing Verbena-like clusters of flowers. In orange, white, rose and other colors; excellent for bedding. Choice Tall Mixed—Pkt. 10c. Choice Dwarf Mixed—Pkt. 10c.

HUMULUS (Japanese Hop)

A rapid growing ornamental climber covering arbors, trellises, etc. in one season. The foliage resembles the common Hop and is very luxuriant making a dense vine. Will stand extreme heat and remain green until frost. An annual. Japonicus—Green foliage. Pkt. 10c. Japonicus Variegatus—Beautifully splashed and striped with silver. Pkt. 10c.

HUNNEMANNIA (Bush Eschscholtzia)

Known also as the Mexican Tulip Poppy. An erect-growing, tender perennial, about 2 ft. high. Foliage fine-cut, blossoms beautifully cup-shaped, bright yellow and about three to four inches across. Stems, long and smooth. Unlike the average poppy, Hunnemannia will keep for several days in water and makes a splendid cut flower. Pkt. 30c.



Hunnemannia

IPOMOEA

Splendid rapid growing climbers. The flowers are beautiful and varied and resemble giant Morning Glories. The foliage is luxuriant and makes a growth of 10 to 30 feet a season. The seed of several varieties, especially the moon flower, should have the outer shell punctured and then soaked in water for twelve hours or more to germinate it.

Coccolinea—Brilliant scarlet flowers with small foliage. Pkt. 10c.

Bona Nox (Evening Glory)—Fragrant violet flowers, expanding in the evening. An annual. Pkt. 10c.

Grandiflora Alba (White Moonflower)

Large white fragrant flowers which expand at night and early morning. Annual. Pkt. 10c.

Heavenly Blue—Sky blue flowers and one of the most attractive of Ipomoeas. An annual. Pkt. 10c.

Leari—Large deep blue flowers expanding at night. A perennial vine sometimes called Blue Moonflower or Blue Dawnflower. Pkt. 10c.

JOB'S TEARS

See Coix Lachrymae.

KENILWORTH IVY

An attractive little perennial trailing plant, very useful for baskets, pots and rock work. Pkt. 10c.

KOCHIA (Summer Cypress)

Childsii Improved—A splendid ornamental annual plant, forming dense oval bushes, 2 to 4 feet high, of small feathery light green foliage. As summer advances this changes to a carmine hue and finally to a fiery red. A very attractive plant at all times. Also called "Burning Bush." Pkt. 10c. oz. 25c.

KUDZU VINE

(Pueraria Thumbergiana)

One of the most rapid growing vines known, often making 40 feet in a season. It may be trimmed frequently for stock feed. All kinds of animals eat it readily, especially good for milch cows and goats. The seed is slow in germinating and should be punctured or soaked over night in warm water. Pkt. 10c.

LATHYRUS LATIFOLIUS

Everlasting Pea—A hardy perennial climber of great beauty with elegant

sweet pea like flowers in great profusion; height, 6 to 8 feet.

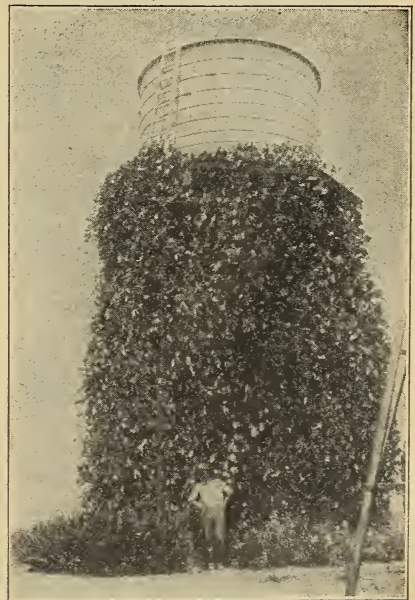
Pink Beauty, White, Red, Fine Mixed. Pkt. 10c. ea.

LAVATERA

Trimestris Grandiflora Rosea—An annual of easy culture growing 2 to 3 feet in height. The plants are bushy and bloom profusely through the summer and fall. The flowers resemble single Hollyhocks and make attractive bouquets when cut. Pkt. 10c.

LINUM (Scarlet Flax)

Rubrum—A hardy annual one foot high. Of slender and graceful appearance, with smooth stems and bright red flowers, which are borne in great profusion. Can be sown early out of doors, and thrives well in good soil. Pkt. 10c.

KUDZU VINE (Pueraria Thumbergiana)
2 years old



Lobelia Crystal Palace

LOBELIA

A hardy annual and perennial. The annual grows four to six inches high, is of compact growth, and literally covered with small bright flowers. By cutting back the plants during the summer and giving plenty of water they may be kept in flower all summer. Used for ribbon work and borders or hanging baskets.

Bernard's Perpetual—Flowers brilliant ultramarine blue, with a pure white mark at the base of each one of the two lower petals; height, 6 inches. Pkt. 10c.

Crystal Palace—Undoubtedly the finest dwarf blue Lobelia for bedding. Plants very compact, profusely covered with rich blue flowers. Height, 4 inches. Pkt. 10c.

Hamburgia—A trailing variety specially suited as a graceful plant for hanging baskets. Light blue. Pkt. 10c.

Compact Light Blue (Emperor William)—A dwarf light blue with light green foliage. Pkt. 10c.

Royal Purple—Deep rich, blue-purple flower, height 6 inches, very compact. Pkt. 10c.

LOVE-IN-A-MIST

See *Nigella*.

LUPINS

One of our most attractive and easiest grown native flowers. The plants grow 2 to 3 ft. high and have handsome spikes of flowers which are fine for cutting. If the plants are not allowed to go to seed they flower for several months in the spring.

Sky Blue, Dark Blue, Rosens. Pkt. 10c.
Annual Mixed—Pkt. 10c.

Perennial Lupin—A very beautiful hardy perennial. The foliage is a soft green and the stately spikes of flowers rise several feet above the foliage. They bloom continuously during the spring.

Choice Mixed—Pkt. 15c.

A & M MORNING GLORY (Convolvulus)

Free flowering, beautiful climbers with rich and varied colored flowers; very useful for covering lattice work, verandas, etc., where they are exceedingly effective. Soak the seed for several hours in warm water before planting.

Major Tall Mixed—Attains a height of 15 feet or more, and comes in shades of Rose, Crimson, Blue and White. Pkt. 10c. oz. 20c.

Minor Dwarf Mixed—A beautiful hardy bedding and border plant, attaining a height of about 1 foot. Pkt. 10c. oz. 25c.

Imperialis (Imperial Japanese Morning Glory)—The best Morning Glory for strong growth and varying colors. Height, 15 to 20 ft. Pkt. 10c. oz. 25c.

MOONFLOWER

See *Ipomoea*.

A & M MARIGOLD

A & M strains of Marigold are becoming increasingly popular, and below we offer varieties which are most in demand.

African

African Tall Double Orange—Beautifully formed flowers of gigantic size and bright color; height, 2½ feet. Pkt. 10c.

African Tall Double Lemon—Like the above but a pure citrus yellow. Pkt. 10c.

African Tall Double Mixed—Pkt. 10c.

African Dwarf Double Mixed—Pkt. 10c.

French

The flowers are much smaller than the African, but are greatly prized for bedding.

Tall French Mixed—In shades of yellow, brown and tricolors. Height, 2 ft. Pkt. 10c.

Dwarf French Mixed—Like the above but only 10 inches high. Pkt. 10c.

Dwarf French Legion of Honor—The color is a dark velvety brown, gracefully surrounded by a distinct gold ring. The compact, bushy plant flowers abundantly and is more lasting than any other annual. Pkt. 10c.

Dwarf French Golden Ball—A double golden yellow of very compact growth. Very fine for ribbon borders and beds. Blooms profusely. Height 1 ft. Pkt. 10c.



A & M African Tall Marigold

Marigold is a hardy annual, in dwarf and tall varieties, growing from 6 in. to 3 ft. high. The flowers are various shades of yellow and brown. The tall varieties are very valuable for large bedding or background work, and the dwarf varieties for borders.

MANDEVILLA SUAVEOLENS

Chili Jasmine—An attractive climber with large white or bluish white fragrant flowers. The flowers often measure 2 inches across and bloom in racemes. Height 10 to 15 ft. Pkt. 10c.

MATRICARIA (Fever Few)

White (Capensis)—A perennial bearing small double white flowers. Good for cutting. An old fashioned garden flower. Pkt. 10c.

Golden Ball—A compact dwarf plant, used for borders. The flowers are a double yellow and bloom freely. Pkt. 10c.

MARVEL OF PERU

See *Four O'Clock*.



Japanese Morning Glory

MATHIOLA BICORNIS (Night Scented Stocks)

An annual growing about one foot high giving a sweet perfume in the evening. Pkt. 15c.

ICE PLANT (Mesembryanthemum)

Crystallinum—The variety is largely grown for the glistening foliage. The leaves are large, fleshy and covered with glistening dots. The flowers are small and white. This is not the trailing variety used on banks. Pkt. 10c.

MIGNONETTE

Hardy annual, growing 6 to 12 inches high and bearing pyramid-shaped spikes, exceedingly fragrant. Sow in the fall for early blossoms in the spring. Valuable for bedding or border.

A & M Colossal—A new giant Mignonette. The spikes are two to three inches in diameter and each plant has many spikes. The flowers are a deep cream and fragrant. A novelty worth having. Pkt. 15c.

Allen's Defiance—Long spikes of whitish flowers and compact growth. Pkt. 10c.

Goliath Red—Robust growing variety with enormous spikes of red colored flowers; height, 15 inches. Pkt. 10c.

Machet Mixed—A dwarf compact variety, with large stubby spikes covered with copper-red flowers. Pkt. 10c.

Sweet Scented (Reseda Odorata)—Pkt. 10c. oz. 25c.

MIMULUS

A half hardy perennial, growing 1 foot high. Blooms freely and exists in a large variety of colors. For gardens in a moist shady situation. Blooms first year from seed if sown early.

Tigrinus, or Monkey Flower—Large flowers of several colors, and spotted. Pkt. 10c.

MINA LOBATA

A showy hardy annual climber, bearing flowers of a brilliant red, changing to a pale yellow. Pkt. 10c.

MOURNING BRIDE

See *Scabiosa*.

MYOSOTIS

See *Forget-Me-Not*.



A & M Nasturtium Dwarf

NEMESIA

Hardy annual. This flower is obtainable in numerous shades of beautiful colors, and when grown in mass form gives a fine effect. Sow in a seed bed early in the spring and transplant.

Strumosa Suttoni—Mixed colors, height 15 inches. Pkt. 25c.

NEMOPHILA

A hardy annual about six inches high. Has small, cup-shaped blossoms about one inch in diameter, in white and shades of blue.

Insigna (Baby Blue Eyes)—Sky blue, with white eyes. Pkt. 10c.

Choice Mixture—Pkt. 10c.

NICOTIANA, OR FLOWERING TOBACCO

A hardy annual, growing 3 feet high, with slender tubular flower. Belongs to the tobacco family. Requires plenty of room in the garden.

Affinis—White, and very fragrant. Pkt. 10c.

Sanderea—A new, large flowering type, with various bright-colored blossoms. Pkt. 10c.

NIGELLA (Love-in-a-Mist)

A hardy annual, one foot high, with finely cut foliage. Oddly shaped blossoms in blue and white, and curious seed pods. Of easy culture.

Miss Jekyll—Long stemmed flowers which are of a clear corn-flower blue; elegant foliage; height, 18 inches. Pkt. 10c.

Mixed Colors—Blue and White. Pkt. 10c.

OENOTHERA

Evening Scented Primrose—A tall growing plant bearing an abundance of large yellow flowers which expand in the evening. Height 2 to 3 feet. May be planted in part shade. Pkt. 10c.

PASSION FLOWER

A hardy perennial climber, very satisfactory for immense growth, as it will cover a porch or small cottage in one season.

Coerulea Grandiflora—Sky-blue. Pkt. 10c.

Red (Tacsonia)—A beautiful red. Pkt. 10c.

Edules (Passiflora)—A rampant grower, blossoming freely. The pulp of the fruit is delicious. Pkt. 10c.

PENTSTEMON

Gloxinioides "Sensation"—The large Gloxinia shaped blossoms vary from pure white, pink, rose and crimson to mauve and purple, including many which are beautifully edged. Hardy perennials. Height, 2 feet. Pkt. 15c.

Hybrids Mixed—A free flowering mixture containing many colors. Pkt. 10c.

A & M NASTURTIUMS

These favorite and well known flowers are popular because of the great variety of colors which may be obtained with very little labor. They are not particular as to soil, fertility or cultivation and may be seen at the beach resorts growing in banks of pure sand where they get little or no attention. If you have an unsightly spot, plant A & M Nasturtiums and convert it into a beauty spot. The Dwarf varieties may be used for bedding and borders while the tall climbing varieties may be used for covering unsightly fences and fence corners. The nasturtium is known to most every one but few people appreciate its real value for the uses we have described. They will bloom in a few weeks after planting and will continue until cut down by the frost. A & M Nasturtiums are blended in pleasing mixtures and carry a great variety of color.

Dwarf

Aurora—Terra Cotta.
Empress of India—Dark scarlet, dark leaved.

Golden King—Indian yellow, dark leaved.

Ruby King—Bluish rose.

Spencer David Burpee—Scarlet, wavy green foliage.

Ivy leaved Dwarf Mixed.

A & M Dwarf Mixed.

Pkt. 10c each, oz. 20c.

Tall

Jupiter—Golden Yellow.

Regellanium—Purplish crimson.

Twilight—Yellow marbled salmon rose.

King Theodore—Bright crimson, dark leaved.

Scarlet.

Ivy Leaved Tall Mixed.

A & M Tall Mixed. Pkt. 10c each, oz. 20c.



Ruffled Giant Petunias

A & M PETUNIAS

A splendid race of plants, rich and varied colors, and profuse flowering with their charming and tender looking flowers, they are very beautiful for groups in the open. Sow seed early in spring, scatter thinly on an even surface and barely cover the seed with sand. If intended for the open ground, plant out into a frame to be kept until planting-out time. If for pots, pot singly into small pots in stong, rich soil mixed with sand and shift as the plants grow larger.

Superb Double Fringed Mixed—One of the finest strains of Petunias in existence. The double flowers are very large, full and symmetrically formed, having the edges of the petals beautifully fringed. Pkt. 50c.

Giants of California—A California introduction. An extremely fine type of this well known flower. A mixture which will be appreciated by all growers of Petunias. Pkt. 35c.

Ruffled Giant Petunias—A beautiful, deep throated new strain with flowers that are ruffled, fluted and fringed. Solid intense colors. Pkt. 25c.

Grandiflora Single Mixed—Exceedingly handsome and free flowering, containing the greatest variety of colors, yellow throated, veined and blotched. Very large flowers. Pkt. 15c.

Hybrida Fine Mixed—The best Petunia for massing in beds and borders, yielding a profusion of brilliantly marked flowers. Pkt. 10c.

Howard's Star Improved—Large velvety purple with a white star. Makes a very

striking and attractive bed or border. Pkt. 15c.

General Dods—A rich blood red, this is a fine color. The flowers are large and erect and the plants large and free blooming. Pkt. 10c.

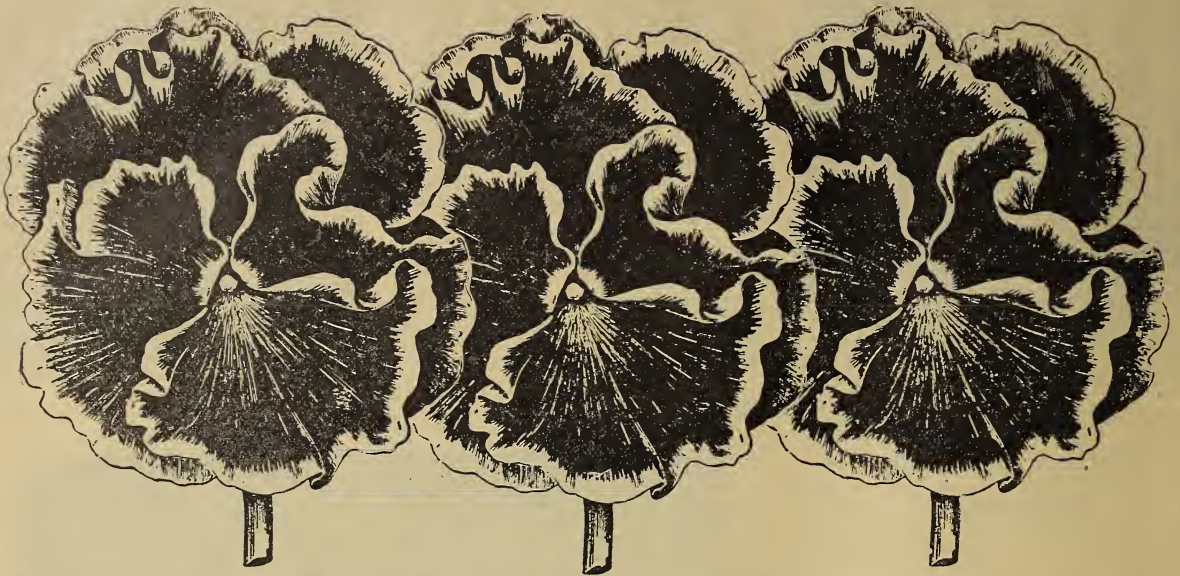
Lord Courtenay—A fine brilliant rose color with yellow throat. One of the finest varieties we offer. The flowers are large and showy and produced abundantly on large sturdy plants. Pkt. 15c.

Nana Erecta Snowball—These plants are erect and compact and are especially adapted for borders. The flowers are large and in constant bloom. Pkt. 15c.

Nana Erecta Rosy Morn—Of the same compact growth as *Nana Erecta Snowball*, but of lovely pink color with contrasting white throat. An improved strain. Pkt. 20c.

Nana Erecta Violaacea—A new strain. This is a fine deep violet, the texture of the flower is like velvet and the plant growth erect and compact, like all of this class. Pkt. 20c.

PANSIES



MASTODON PANSIES

These magnificent giant pansies are without a doubt, the most wonderful pansies of the day, with a robust vigor unknown in any other strain. These blossoms are almost four inches across and are of a most wonderful variety of colors and variegations. They bloom from two to four weeks earlier than any other variety of pansies. It is impossible to paint a word picture that will do justice to these flowers. You will never regret it, if you have them in your garden or porch box.

Adonis.—Lovely Sky-blue. Pkt. 25c. .

Bronze Mastodon.—Very large, with all the different shades from burnished brass to gold, with no two flowers exactly alike. Pkt. 25c.

Madame Steele.—Elks Purple, of fine form and enormous size. Pkt. 25c.
Panama Pacific.—A huge deep yellow; some have the dark center, some without. A beautiful bedding color. Pkt. 25c.

White Mastodon.—Snow white with a large center, very large and beautiful. Pkt. 25c.

Mastodon Mixed.—A wonderful collection of rich velvety shades, in great variety, with fine long stems. Pkt. 25c.

Pansies thrive best in a moist, sunny location and in rich loamy soil. Seed should be sown in the autumn for early spring blossoms, or can be sown early in the year for good flowers later in the spring. The plants must be transplanted twice in order to get the largest flowers; once from the seed box to a chosen bed, and again to the open garden. This is important for large size pansies; use manure liberally. The blossoms are usually larger in the spring and again in the fall, and while they bloom freely all summer, the blossoms are small during the hot months.

A & M GIANT STRAINS

We offer Pansies in the following separate colors. They have been selected with care in order to give a complete range of colors from which to choose. Wonderful color effects and an abundance of plants can be had from planting a few packets from the following:

Special offer—Your choice of ten regular 15c packets, \$1.00.

Giant Aurora.—Probably the best pure white of the Giant strain. Pkt. 15c.

Giant Azure Blue.—Gigantic blooms of a delicate pale shade, freely produced on compact plants. Pkt. 15c.

Giant Bridesmaid.—Shades of white shining rose, blotched. Pkt. 15c.

Giant Eros.—This grand novelty produces very large flowers of a deep velvety brown color, with a broad golden yellow margin. The back of each bloom has the same broad margin as the front side, while the dark velvety center is shining through. Pkt. 15c.

Giant Golden Queen.—A very pleasing shade of golden colored flowers, carried on good length stems. Pkt. 15c.

Giant Madam Perret.—A variety of unusually compact habit. The lower petals are pale with rich rose color markings. Pkt. 15c.

Giant Psyche.—Not many of the pansy varieties have such a winning appearance as Psyche. The characteristic five velvety, violet blotches are surrounded by a broad white edge. It is an ideal exhibition or market pansy. Pkt. 15c.

Giant Prince Henry.—Darkest blue, very large beautiful flower. Pkt. 15c.

Giant Ruby Red.—Very large blooms in striking red shades. Pkt. 15c.

Giant White (Purple Eye).—Large well formed flowers with black center. Pkt. 15c.

Giant Yellow (Black Eye).—Large handsome flowers of a rich yellow with black eye. Pkt. 15c.

CHICAGO PARK BEDDING VARIETIES

Cardinal.—Rich shade of red. Pkt. 10c.
Golden Gem.—Large pure yellow. Pkt. 10c.

Faust (King of Blacks).—Large, well formed, glossy black flowers. The plants are compact and bloom for a long time. Pkt. 10c.

Peacock.—Handsome flowers of a rich purple. Pkt. 10c.

White (Black Eye).—Large, well formed flowers with black center. Pkt. 10c.

A & M GIANT PANSY MIXTURES

Masterpiece ('Ruffled Pansy')—A splendid new class. The petals have the appearance of fluted velvet. The colors are rich and varied, and the plants hardy and vigorous growers. Pkt. 25c.

New Giant Orchid Flowering.—A beautiful strain in rare shades. A quick bloomer and very fine. Pkt. 15c.

Giant Trimardeau or French Mixed.—A very showy class of vigorous compact growth, flowers of an enormous size; finest strain. Pkt. 15c.

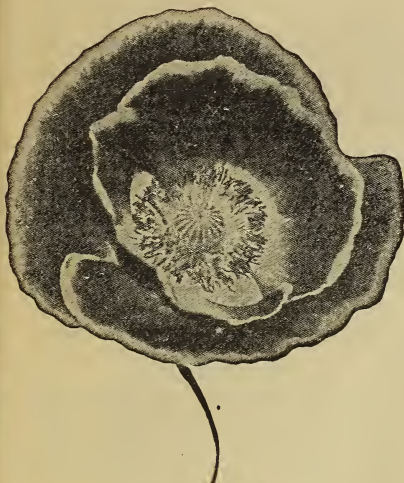
Fine Mixed.—A splendid mixture for bedding. Pkt. 10c.

TUFTED PANSY

See Viola Cornuta.

A & M POPPIES

The different varieties of poppies are always favorites for outdoor display and the cultivation of them being so extremely simple entitles them to a place in every garden. Seed should be sown where the plants are intended to flower, because it is difficult to transplant them with any measure of success.



Poppy Shirley

Double Annual

Eldorado Double Shirley—A new and lovely variety of Shirley poppies in a variety of wonderful colors. Each flower has many full petals giving the double appearance. A seed of these poppies would be a delight to any lover of flowers. Pkt. 10c.

Ranunculus Flowered—This variety of double Shirley was so named because of its resemblance to Ranunculus. It is a lovely flower and keeps well in water if cut before buds are fully opened. Pkt. 10c.

Carnation Flowered Double Mixed—Choice assortment of brilliant colors. Flowers very double and well fringed. The plants grow to a height of four feet and bear immense carnation-like blooms 6 to 8 inches across. Annual. Pkt. 10c.

Peony Flowered Double Mixed—Annual. Immense double globular flowers. Splendid for bedding and massing. Choice mixture. Pkt. 10c.

PRIMULA (Primrose)

Primroses are charming plants which blossom freely during the spring and winter. They are of easy culture and should be sown from March to May and again in July to August for a succession of bloom. All make splendid pot plants and some blossom freely out of doors even during the winter.

Giant Flowered—The beautiful Fringed Chinese and Obconica Grandiflora are large flowered, bloom freely for several months and are one of the very best house plants. We offer only the best seed.

Chinese Fringed Mixed—Pkt. 35

Obconica Grandiflora—Pkt. 35c.

Veris Elatior (Polyanthus)—A hardy perennial Primrose which may be grown either in pots or out of doors. They flower very freely. They are commonly called Cowslip or Oxlip. Height 10 inches. Fine Mixed. Pkt. 25c.

Malacoides—A free flowering improved variety of Baby Primrose. They may be planted out of doors or used as pot plants. If planted in August in partial shade they will flower freely during the winter. Flowers a delicate lilac. Pkt. 25c.

Single Annual Shirley

The most charming poppy in cultivation. The blossoms are bright and showy and include an almost endless variety of colors, from pure white, pink, terra cotta, salmon, chamolais and rosy carmine, to brilliant crimson, many of the flowers being beautifully flaked or edged with white.

American Legion—A grand new poppy introduced for the first time this season. The color is brilliant orange scarlet with yellow anthers. The flowers are three times the size of the ordinary Shirley Poppy. They grow about 2 to 3 feet high and should be planted where they are to flower. They give the best effect when grown in masses or beds. Pkt. 15c.

Blue Shades—Grey blue.

Apricot—Deep apricot shades.

Rose Pink—A fine large flower.

Picotée—White cup, scarlet edged.

A & M Shirley—Fine mixed. Pkt. 10c.

Flanders Poppy—The famous poppy of Flanders Field. A single annual of blood red color. Abundant in the fields of Europe. Pkt. 10c.

Glaucum (Tulip Flowered)—Beautiful variety, producing flowers of the most vivid scarlet, effective for beds or masses. Annual. Pkt. 10c.

Perennial Poppies

Oriental Hybrids Mixed—These tall stately Poppies have immense flowers in the most gorgeous colors. Height 2½ ft. Our seed has been saved from the choicest new hybrids. Pkt. 10c.

Nudicaule, Iceland Poppy—A beautiful class of perennial poppies. Sow in March and they will flower the same year. The beautiful large blossoms are borne on wire-like stems above the beautiful fern-like foliage, with a great variety of colors. The Iceland Poppy has more lasting qualities, as a cut flower, than any other poppy.

Single Mixed—Pkt. 10c.

Double Mixed—Pkt. 25c.



Phlox

PHLOX DRUMMONDII

One of the most beautiful and easiest grown of our hardy garden annuals. The flowers are produced in large trusses and may be had in many lovely colors. The seed may be sown in boxes and transplanted when danger of frost is over or may later be sown in the open. They make a very effective show when grown in masses or borders.

Large Flowering Grandiflora—A fine type having large heads of bloom and growing 15 inches in height. This variety may be used for cutting. Scarlet, Yellow Light Rose dark center Lilac with white center Rosy Chamolais White. Pkt. 10c each.

Large Flowering Dwarf—This type has the large individual blooms of the Grandiflora but the growth of the plant is compact and dwarf attaining a height of 8 inches. Effective for parkings and low borders.

Fireball (Scarlet) White. Mixed. Pkt. 10c. each.

Star Phlox—A dwarf variety bearing star shaped blossoms in great abundance. Pkt. 10c

Perennial Phlox (Decussata)—A very handsome variety of Phlox quite different from the annual. The individual flowers are large and borne in immense heads on tall stems. They flower during the summer and fall and come up from the old roots in the spring. Seed may be sown in spring or fall. Extra choice mixture. Pkt. 15c.

PYRETHRUM

Hardy perennials which are easily grown and make handsome plants.

Hybridum Roseum—This variety is a tall vigorous grower and flowers freely. The flowers are daisy-like and the colors vary from rose, pink and cream to white; all have yellow centers. They make very desirable cut flowers, keeping well in water.

Single Mixed—Pkt. 10c.

Double Mixed—Produces a fair percentage of doubles. Pkt. 25c.

Golden Feather—Fine compact habit of growth, with bright yellow foliage, largely used for edgings and ribbon borders. Height, 9 inches. Pkt. 10c.

Cinerariaefolium—Bright green foliage, sturdy upright growth; used for borders and bedding. This is the variety used for making Buhach, the popular insect flower. Pkt. 10c.



Pyrethrum

A & M SCABIOSA

Mourning Bride, Pin Cushion—An annual which is an old garden favorite and which has been much improved recently.

The flowers are large and vary from a lovely light blue to deepest red. They are borne on long graceful stems and produced abundantly from spring until autumn. They are especially recommended for cutting. Sow seed in boxes and transplant or sow in open ground after frost is over, and thin to 15 inches apart. Height 3 to 4 feet.

Azure Fairy—Light Blue.

Black Prince—A deep red almost black.

Flesh Color—A soft flesh pink.

Fiery Scarlet—A brilliant color.

Rose—Soft Rose.

Yellow—Light yellow.

Mixed—A mixture of all shades.

Pkt. 10c. each.

Caucasica—A highly decorative perennial variety. Flowers large and of a soft lavender or heliotrope shade. Especially valuable for cutting, lasting a long time in water. Pkt. 10c.

Japonica—A perennial variety from Japan bearing large lavender blue flowers in great profusion. Splendid for cutting. Height 3 ft. Pkt. 10c.



SCABIOSA

SALVIA (Scarlet Sage)

A tender perennial blooming the first year from seed. They make gorgeous plants, the brilliant red blossoms are borne on long stems in racemes or spikes and are displayed with striking effect against the deep green foliage.

Splendens—Height 3 feet. Pkt. 10c.

Bonfire—Compact bush 2 feet in height. Pkt. 10c.

PLATYCODON (Japanese Bellflower)

A handsome perennial belonging to the Campanula family. The flowers are bell-shaped and borne freely throughout late spring and summer. They should be planted in well drained loamy soil and allow the flower stalks to die down naturally so that the crown will not be injured. A clear blue and pure white in mixture. Pkt. 10c.

PORTULACA

Beautiful race of dwarf plants for rock work or dry sunny locations, bearing glossy cup-shaped blossoms in brilliant colors. Annual.

Double Mixed—Saved from the finest flowers only, and will produce a large percentage of doubles. Pkt. 15c.

Single Mixed—Large flowers. Pkt. 10c.



Salpiglossis

SALPIGLOSSIS

Fine Mixed—Highly ornamental half-hardy annual with large, veined, funnel-shaped flowers; much prized for cutting; very showy in beds or border. A bed of these beautiful plants is one of the most striking features of the garden during July and August. Pkt. 10c.

RANUNCULUS

Giant French Mixed—These popular flowers are usually grown from bulbs. Though it takes longer to grow from seed, many lovely different colors will result. Should be sown in open ground. Pkt. 25c.

RHODANTHE

Maculata Rosea—One of the most attractive everlasting flowers. The flowers hang like little bells on the stems and make a pleasing and dainty cut flower either fresh or dried. Pkt. 10c.

SENSITIVE PLANT

An interesting plant, the leaves of which close when touched; elegant foliage; flowers pink. Pkt. 10c.

SHASTA DAISY

See Daisy.

SMILAX

A perennial vine which thrives best in a shady location. Very useful for decorative purposes. Pkt. 10c.

SCHIZANTHUS

Very beautiful and interesting annuals. This is one of the easiest annuals to raise from seed. Sow in the open where plants are to flower. Exceptionally beautiful when in full bloom and literally covered with small orchid-like flowers.

Grandiflora Mixed—Pkt. 10c.



Schizanthus

ROMNEYA COULTERII (California Tree Poppy)

Also well known as the Matilija Poppy; perennial. It is of value as a cut flower, lasting well in the water, and its delicate primrose like perfume is most acceptable. They never lose the crumpled folds that in the case of most poppies betoken newly opened state. Flowers are four to five inches across, pure white, with a fine bunch of yellow stamens, resembling white, single Paeonies. Pkt. 10c.

RICINUS (Castor Oil Plant)

Effective for semi-tropical garden. Easily raised from seed, and should be grown in deep rich soil.

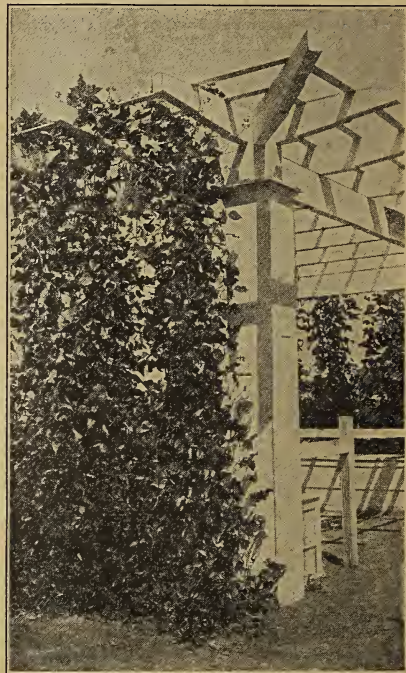
Sanguineus—Blood red stalks and red fruit. Height 8 feet. Pkt. 10c, oz. 25c.

Zanzibariensis—The giant type of the Castor Bean. Foliage varies in shades of color during the different stages of growth. Being a strong grower very suitable as a windbreak. Pkt. 10c, oz. 25c.

Mixed Varieties—Pkt. 10c, or 25c oz.

RUDBECKIA

Bicolor Superba—These hardy annuals are of easy culture and produce an abundance of flowers. The flowers have a cone in the center surrounded by yellow and brown petals. These bright flowers are borne gracefully on long stems, and are especially recommended for cutting. Pkt. 10c.



Scarlet Runner

SCARLET RUNNER

A variety of climbing bean having rich scarlet blooms and most useful for decorative purposes in covering arbors and unsightly structures. The pods are also appreciated as an addition to the vegetable list. Pkt. 10c.

SNAIL VINE (Phaseolus Caracalla)

A perennial vine bearing in abundance large clusters of fragrant waxy flowers curiously twisted, so as to resemble a snail. The vine grows about 15 feet high.

Pkt. 10c.

A & M Improved Strains of Double Flowering Stocks



Early Mammoth Branching Nice

The stock is one of the many popular plants used for bedding. For brilliancy and diversity of color fragrance, profusion and duration of bloom it is unsurpassed. Sow the seed in pans or boxes and transplant when large enough to an open sunny location. Be careful to save the weak and delicate plants, as these usually throw the best doubles. It is also a good idea to plant rather thickly so that the single can be weeded out as they appear. The seed can only be saved from single flowers, but as we purchase from the most reliable growers, our stocks produce a large percentage of doubles. Stocks are one of our best winter blooming plants. May be planted from August to March for a succession of winter and summer bloom.

Early Mammoth Branching Nice

This type is excellent for bedding and borders and is the best for cutting. We offer fine varieties in separate colors and a choice mixture. Height 18 inches.

Giant Abundance—Very large spikes of Carmine Rose flowers. Pkt. 15c.

Giant Almond Blossom—Large white flowers shaded with carmine. Pkt. 15c.

Giant Beauty of Nice—A flesh pink strain. One of the most popular of Nice varieties. Pkt. 15c.

Giant Belle of Naples—A lovely old rose color. Pkt. 15c.

Giant Bright Violet—A rich violet or purple. Pkt. 15c.

Giant Cote d'Azur—Light violet blue, a very desirable shade. Pkt. 15c.

Giant Crimson King—Long Spikes, of a rich crimson color. Pkt. 15c.

Giant Empress Augusta Victoria—Silvery Lilac. One of the best colors. Pkt. 15c.

Giant Golden Sheaf—A new shade, chamois shaded with rose. Very lovely. Pkt. 15c.

Giant Mont Blanc—As its name implies, it is a white variety, very free flowering. Pkt. 15c.

Giant Monte Carlo—Canary Yellow. Pkt. 15c.

Giant Parma Violet—A fine pale violet. Pkt. 15c.

Giant Queen Alexandra—Long spikes of rosy lilac. Pkt. 15c.

Finest Giant Mixed—All colors. Pkt. 15c.

Giant Perfection or Dresden

Of branching habit with long stems which makes this variety very useful as a cut flower. The mixture contains 8 or more different colors. Height 2 feet.

Deep Shining Rose—A truly lovely color, not found in the Nice variety. Pkt. 15c.

Choice Mixed—Pkt. 15c.

Dwarf Double Ten Week

This dwarf variety is splendid for edging, carpet bedding, borders and cut flowers. The different shades make very pleasing color effects. Height 12 inches.

Crimson **Light Blue** **Rose**
Canary Yellow **Peach Blossom** **White**

Dark Blue **Carmine Pink** **Violet Queen**
Choice mixed. Mixed—Pkt. 10c. each.

SNAPDRAGON

See Antirrhinum.

SILENE (Catchfly)

Pendula Compacta—Bright double rose colored flowers produced in great abundance on dwarf compact plants. Very excellent for borders, masses and recommended for carpet bedding on bulb beds. Pkt. 10c.

STATICE

Sinuata—An everlasting flower deserving far greater popularity. Large sprays of many colored small flowers which when dried make fine winter bouquets. Blue, yellow, white, rose, mixed—Pkt. 10c. each.

Latifolia—This variety produces large branching sprays of minute lavender-blue flowers that are invaluable for cutting. May also be dried and used with everlasting flowers. A perennial. Pkt. 10c.

Caspia—A new variety having lovely light blue minute flowers borne in long sprays. Caspia gives an airy graceful effect when mixed in bouquets with any kind of flowers. Pkt. 10c.



New Red Sunflower

STEVIA

Serrata—Small fragrant white flowers borne in large heads which are valuable for cutting. A free blooming perennial of easy culture. Pkt. 10c.

SUNFLOWER (Helianthus)

Stately, hardy, annuals of easy culture. Useful for background or as a fence and often grown for the seed. Height, 6 to 8 feet.

California Double—Large, massive, bright yellow flowers, height 6 feet. Pkt. 10c.

New Red Sunflower—Is a very apt description of this new variety. The plant is of a freely-branching habit, with well-shaped dark-centered flowers of bright chestnut red, merging to a yellow at the tips or the petals. Height 6 feet. Pkt. 10c.

Miniature Mixed—This is a splendid cutting variety of many different colors which blend together beautifully. Pkt. 10c.

A & M Winter Flowering Spencer Sweet Peas

THE PRIDE OF CALIFORNIA

We are headquarters for strictly high-grade Sweet Pea Seed; they are the best that money can buy.

CULTURE—Sweet Peas will thrive on most any kind of soil if enriched with well-rotted manure, but a heavy clay soil produces best results. Ample arbor needs should be provided to attain highest perfection of bloom. The vines will grow eight feet tall and become a solid mass of bloom, which should be cut every day to prolong the life of the plant. Apply from time to time some A & M Plant Food, and water abundantly, but see that there is good drainage, that the roots do not rest in wet, sour earth.



A & M GIANT EARLY FLOWERING SPENCERS

These are sometimes called Winter Flowering and also Christmas Flowering. The growers class them as early flowering because when planted at the same time as the lates (standards) they will flower at least a month earlier. Because of this early tendency, if planted in August or September they may be brought into bloom in the late Fall and early Winter, and for this reason they have been called Christmas Sweet Peas. The planting season is from the first of August until the middle of January. The varieties selected have long stems with three and four blooms to a stem.



Amethyst—Royal purple. Pkt. 25c, oz. \$1.00.
Apricot Orchid—Buff pink. Pkt. 25c, oz. \$1.00.
Asta Ohn—Lavender. Pkt. 25c, oz. \$1.00.
Aviator—Dazzling crimson scarlet. Pkt. 35c, oz. \$1.50.
Blue Bird—Light blue. Pkt. 25c, oz. \$1.00.
Blanche Ferry—Pink and white. Pkt. 25c, oz. \$1.00.
Bohemian Girl—Deep pink. Pkt. 25c, oz. \$1.00.
Canary Bird—Deep primrose. Pkt. 25c, oz. \$1.00.
Columbia—Rose standard with white wings. Pkt. 35c, oz. \$1.50.
Cream—As named. Pkt. 25c, oz. \$1.00.
Congo—Maroon. Pkt. 25c, oz. \$1.00.
Enchantress—Rose pink. Pkt. 25c, oz. \$1.00.
Fire King—Orange scarlet. Pkt. 25c, oz. \$1.00.

Gorgeous—Soft salmon rose. Pkt. 25c, oz. \$1.00.
Glitters—Scarlet cerise. Pkt. 35c, oz. \$1.50.
Grenadier—Dazzling scarlet. Pkt. 50c, oz. \$2.50.
Hercules—Mammoth rosy pink. Pkt. 25c, oz. \$1.00.
Harmony—Clear lavender. Pkt. 25c, oz. \$1.00.
Helen Lewis—Orange salmon. Pkt. 25c, oz. \$1.00.
Illumination—Salmon cerise. Pkt. 25c, oz. \$1.00.
Liberty—Large crimson. Pkt. 25c, oz. \$1.00.
Mauve Beauty—Rosy mauve. Pkt. 25c, oz. \$1.00.
Othello—Deep maroon. Pkt. 25c, oz. \$1.00.
Rose Charm—Large bright rose. Pkt. 35c, oz. \$1.50.
Rose Queen—Rose pink. Pkt. 25c, oz. \$1.00.

Song Bird—Pale blush pink. Pkt. 25c, oz. \$1.00.
Spring Maid—Light cream pink. Pkt. 25c, oz. \$1.00.
Snowstorm—Pure white. Pkt. 25c, oz. \$1.00.
Torch—Salmon orange overlaid cerise. Pkt. 25c, oz. \$1.00.
True Blue—Violet blue. Pkt. 25c, oz. \$1.00.
Wedgewood—Bright blue. Pkt. 25c, oz. \$1.00.
White Orchid—Pure white. Pkt. 25c, oz. \$1.00.
Yarrowa—Rose and cream. Pkt. 25c, oz. \$1.00.
Zvolanek's Rose—Giant rose pink. Pkt. 35c, oz. \$1.50.

A & M GIANT EARLY FLOWERING MIXED

Pkt. 25c, ½ oz. 50c, oz. 90c.

CUPID SWEET PEAS

These Sweet Peas make the most brilliant and showy parkings, beds and low borders imaginable. They make a uniform growth about 8 inches high and each plant is about 1 foot in diameter. The colors are pink, white, red, blue, lavender, etc., and a color scheme may be worked out using the separate colors or the choice mixture may be used. They will bloom freely for several months. The culture is the same as for the climbing variety but for a solid mass plant the rows 15 inches apart.

Apple Blossom, pink
Red Captain of the Blues
Othello, maroon

Lavender
White
Mixed

Pkt. 10c each, oz. 30c.

WINTER FLOWERING GRANDIFLORAS

These Sweet Peas, if sown in August or September, will be in flower by Christmas. They are fragrant but flowers are smaller than Spencers.

Christmas pink.
Christmas White.
Earliest of all—Pink and white.
Lavender Nora.
Mrs. Alexander Wallace—Lavender.
Mrs. F. J. Dolnasky—Clear pink.
Blue Jay—Violet blue.
Pkt. 10c, oz. 30c, lb. \$3.00.
Best Mixed—Pkt. 10c, oz. 25c, lb. \$2.50.

SELECTED GRANDIFLORA SWEET PEAS

This is the old hooded type of Sweet Peas which has almost entirely been replaced by the larger waved Spencer. When a brilliant show of flowers in the garden is desired more than cut flowers these will be found quite satisfactory. They are delightfully fragrant.

Spring flowering.
Brilliant Blue Pink Edged White
Dorothy Eckford—White Lavender
Light Blue Helen Pierce—Blue Striped
Yellow Red Prima Donna—Pink
Scarlet Miss Wilmont—Orange Pink
Double Choice Mixed
Pkts. 10c each, oz. 20c.

Choice Mixed—Pkt. 10c, oz. 15c, lb. \$1.50

"RAINBOW COLLECTION"

Of Spencer Sweet Peas, put up in seven separate packets. All colors of the rainbow, making a perfect blend. Red, Pink, Orange, Yellow, Lavender, Blue and Purple. The Collection 75c.

A & M Standard Giant Spencer Sweet Peas

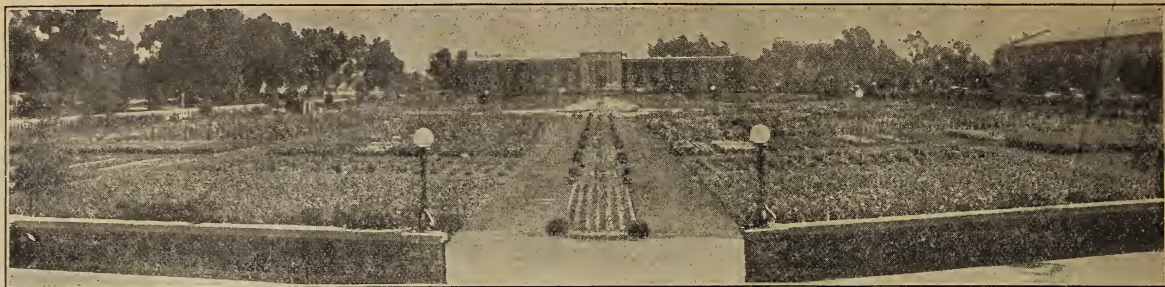


A Field of California Grown A & M Sweet Peas

STANDARD GIANT SPENCERS

This strain of Sweet Peas bears three and four very large flowers on long stiff stems. Many of the flowers are ruffled and wavy and the great assortment of shades makes them a remarkable strain for all purposes. A & M Sweet Peas have been constantly improved year after year since the original Spencer types were introduced and this year is no exception to the rule. The list of A & M varieties offered below includes every worthwhile shade of the Spencer type for out-door growing. Soil and climatic conditions in California are ideal for the growing of Sweet Peas and a few packets of A & M seed with reasonable cultivation will reward the planter with an abundance of beautiful blooms.

- | | | |
|--|---|--|
| America—White ground, flaked red. Pkt. 15c, oz. 40c. | Florence Nightingale—Bluish lavender. Pkt. 15c, oz. 45c. | Marie Corelli—Large rose. Pkt. 15c, oz. 40c. |
| Apple Blossom—Rose and blush. Pkt. 15c, oz. 40c. | Helen Lewis—Orange salmon. Pkt. 15c, oz. 40c. | Mrs. Hugh Dickson—Salmon pink on cream. Pkt. 15c, oz. 45c. |
| Asta Ohn—Lavender. Pkt. 15c, oz. 45c. | Hawmark Lavender—Giant pale lavender. Pkt. 35c, oz. \$1.50. | Mrs. Routzahn—Apricot and pink. Pkt. 15c, oz. 45c. |
| Barbara—Salmon. Pkt. 15c, oz. 50c. | Hawmark Maroon—Finest maroon. Pkt. 35c, oz. \$1.50. | Mrs. Tom Jones—Best azure blue. Pkt. 25c, oz. \$1.00. |
| Blanche Ferry—Pink and white. Pkt. 15c, oz. 40c. | Hawmark Pink—Rose pink flush salmon. Pkt. 25c, oz. \$1.00. | Picture—Deep La France pink. Pkt. 35c, oz. \$1.50. |
| Blue Monarch—Dark blue. Pkt. 15c, oz. 60c. | Hope—Soft rose. Pkt. 25c, oz. \$1.00. | Queen Alexandra—Scarlet. Pkt. 15c, oz. 45c. |
| Clara Curtis—Primrose. Pkt. 15c, oz. 40c. | Illuminator—Orange overlaid cerise. Pkt. 15c, oz. 60c. | Rosabelle—Brilliant rose. Pkt. 15c, oz. 60c. |
| Constance Hinton—Giant white. Pkt. 15c, oz. 60c. | Irish Belle—Lavender and pink. Pkt. 15c, oz. 60c. | Robert Sydenham—True Orange. Pkt. 15c, oz. 45c. |
| Countess Spencer—Giant rose pink. Pkt. 15c, oz. 40c. | Jack Cornwall—Deepest blue. Pkt. 25c, oz. \$1.00. | Royal Purple—Pkt. 15c, oz. 50c. |
| Cherub—Deep cream edged rose. Pkt. 15c, oz. 45c. | King Edward—Crimson, self color. Pkt. 15c, oz. 45c. | Royal Scot—Scarlet cerise. Pkt. 25c, oz. \$1.00. |
| Dainty—White, pink, picotte edge. Pkt. 15c, oz. 40c. | King Manuel—Maroon. Pkt. 15c, oz. 40c. | Scarlet Emperor—Pkt. 15c, oz. 45c. |
| Doris—Soft salmon cerise. Pkt. 25c, oz. \$1.00. | King White—Large pure white. Pkt. 15c, oz. 45c. | Senator—White striped maroon. Pkt. 15c, oz. 45c. |
| Dobbie's Cream—Cream. Pkt. 15c, oz. 50c. | La France—Light shrimp pink. Pkt. 25c, oz. \$1.00. | Stirling Stent—Salmon orange. Pkt. 15c, oz. 40c. |
| Elegance—Giant blush pink. Pkt. 15c, oz. 45c. | Lovely—Rose and flesh. Pkt. 15c, oz. 40c. | Sunproof Crimson—Pkt. 15c, oz. 40c. |
| Elfrida Pearson—Shell pink. Pkt. 15c, oz. 45c. | Loyalty—White striped blue. Pkt. 15c, oz. 45c. | The President—Orange scarlet. Pkt. 15c, oz. 45c. |
| Fiery Cross—Orange scarlet. Pkt. 15c, oz. 60c. | Margaret Madison—Azure blue. Pkt. 15c, oz. 45c. | Warrior—Giant Maroon. Pkt. 15c, oz. 60c. |
| Flora Norton—Light blue. Pkt. 15c, oz. 45c. | Miriam Beaver—Apricot and buff. Pkt. 15c, oz. 45c. | A & M Giant Spencer Mixed—Pkt. 15c, oz. 30c, lb. \$3.00. |
| Florence Morse—Pink. Pkt. 15c, oz. 40c. | | |



Sunken Gardens at the Exposition Grounds, Los Angeles, Cal.

"Important Notice"

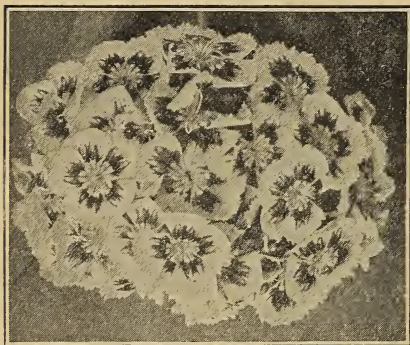
We take pleasure in calling your attention to the seven acre Sunken Garden at Exposition Park, a permanent free exhibit maintained jointly by the City and County of Los Angeles under the auspices of the California Nurserymen's Association. The object of this garden is to demonstrate the great variety of flowering and ornamental plants which can be successfully grown in the open ground at all seasons of the year. A frequent visit to these grounds will be well worth the time of anyone interested in their garden.

THALICTRUM

Dipterocarpum—A recent introduction from China. The foliage somewhat resembles that of the Columbine and the large feathery heads of rosecolored flowers are borne on long stems above the foliage. They bloom through the summer and attain a height of about 4 feet. An excellent perennial. Pkt. 25c.

THUMBERGIA (Black Eyed Susan)

A free blooming annual climber with attractive green foliage. It is also used extensively in hanging baskets, window boxes, etc. The flowers are small in varied colors of yellow, orange and white with black eyes. Finest mixed. Pkt. 10c.



Sweet William

SWEET WILLIAM (Dianthus Barbatus)

A hardy perennial blooming the second year from seed. Grows one to two feet high and bears its flowers in clusters at the end of a stiff stem. The individual flowerlets are handsomely colored and marked. It makes a beautiful bedding plant, and is of easy culture.

Single Varieties, Mixed—Very attractive. Pkt. 10c.

Double Varieties Mixed—Pkt. 10c.
Annual Single Mixed—A fine mixture blooming the first year from seed. Pkt. 10c.

VINCA

Rosea (Madagascar Periwinkle)—An attractive and ornamental plant. Very good for bedding and borders. It is free blooming and makes a fine cut flower, all the buds opening in water. It also makes a fine pot plant. Seed may be sown early in spring in seed boxes or in the open ground after danger of frost is over. Flowers are rose, pink and white. Pkt. 10c.

VIOLA CORNUTA

"Tufted Pansies." A beautiful bedding plant which is very free flowering. Is harder than the pansy and comes in mixed colors. Pkt. 10c.

VIOLET

Dark blue. Very sweet smelling and probably the most popular of the Violet odorato strain. Pkt. 10c.

WALLFLOWER

Delightfully fragrant flowers growing in spikes similar to stocks.

Annual Single Mixed—A beautiful single variety which flowers during the summer from seed sown in the spring. Pkt. 10c.

Perennial Double Mixed—Handsome double flowers. Should be planted in the fall for spring blooming or early in spring for late summer flowers. A fine mixture of colors. Pkt. 15c.

WILD CUCUMBER VINE

One of the most rapid and vigorous climbers we have. It is invaluable for covering unsightly places and fences. Pkt. 10c.

WISTERIA

An extremely graceful climber. For trellis and arbor work no other vine can surpass it. Grows readily from seed but plants do not make rapid growth or bloom until well established. Blue or white. Pkt. 10c.

XERANTHEMUM

Double Mixed—One of the most attractive and satisfactory everlasting flowers. The flowers are white, purple, yellow and rose and are pretty in the garden or dried. Plant in the open ground in a sunny situation after frost is over. Pkt. 10c.

A & M MAMMOTH VERBENAS

A hardy perennial of trailing habit and one of the finest and best known for beds, parkings, etc. The colors are brilliant and varied and the new large flowered strains are handsome as cut flowers. The flowers are fragrant and produced freely throughout most of the year. They will stand much neglect after established, requiring but little water. Plant in seed boxes and transplant to a sunny situation, or may be sown in open ground during warm weather.



Verbena Lucifer

Lucifer (New)—Brilliant scarlet. No eye; a mammoth strain. Pkt. 15c.

Firefly—A bright scarlet with white eye. Pkt. 15c.

Hybrida Giant Mixed—Pkt. 15c.

Blue	Defiance	Scarlet	Pink
Yellow	Purple	White	Mixed

Pkts. 10c. each.

A & M IMPROVED GIANT ZINNIAS

One of the most popular annuals for the back country and warm climates. Planted in the early spring in the Imperial Valley or similar climates they will bloom in six to eight weeks from planting and will continue throughout the summer and fall. A & M Improved Giant Strains of Zinnias are the result of years of selection. The blooms are of immense size often measuring six to eight inches across and the colors are bright and attractive. Do not confuse these Zinnias with the old time flower of ten years ago.

GIANT DOUBLE STRAIN

This strain is offered in several colors. The individual blooms often measure 5 inches in diameter and the plants are in continuous flower from late spring until well into the fall. An annual which can be grown from seed with a minimum amount of trouble.

Flesh Shades	Rose Shades
Golden Yellow	Scarlet Shades
Pink Shades	Sulphur Yellow
Purple Shades	White
Apricot Buff	Special Giant
Mixed.	

Pkts. 15c. each, 1-8 oz. 40c.

All colors mixed—Pkt. 10c, 1-8 oz. 25c.



New Dahlia Flowered Zinnia

LILLIPUT DOUBLE MIXED

Small double flowers. Dwarf compact bushes and profuse bloomer. A good Zinnia for cutting. Pkt. 15c.

GIANT PICOTEE

This very attractive novelty has taken well among the flower fanciers. The bronze, yellow, pink and crimson shades are well marked with Gold Picotee on the edge of petals. Pkt. 25c.

Picotee Golden Pheasant—A new variety. A golden color with edges marked in an attractive shade of bronze; 2 to 3 feet high. Pkt. 25c.

VICTORY-QUILLED

The petals of this type are peculiarly quilled and twisted. Various shades of Rose and Lilac, which when the petals twist, reflect pleasing autumn colors. Pkt. 25c.

HAAGAENA (Mexican Hybrids)

Of new introduction, dwarf, the plant carrying small prettily marked flowers. A variety when better known will have a big demand. Pkt. 25c.

ELEGANS BEDDING ZINNIA

This variety is the most uniform in size of flower and plant. The flowers measure about 2 inches across, have long stems and for bouquets and vase work are both graceful and attractive. A very complete mixture of colors.

Tall Mixed, height 3 feet.

Dwarf Mixed, height 2 feet. Pkt. 10c each.

NEW DAHLIA FLOWERED

The plants are very sturdy and produce many flowers with stout stems. The flowers in full bloom often measure four inches in depth and six to eight inches in diameter.

The colors range from various shades of yellow and orange through pink, rose, crimson, to purple. As many as twenty colors and shades may be found in this Dahlia Flowered mixture and the Giant strain.

The flowers differ from other Zinnias in the way the petals turn in toward the center which gives each flower a deep instead of flat appearance. Some wonderful new colors are offered this year.

Illumination—Deep rose. Pkt. 50c.

Crimson Monarch—The largest and best red. Pkt. 50c.

Oriole—Orange and gold. Pkt. 50c.

Special Dahlia Flowered Mixture—Contains all the new novelties. Pkt. 35c.

Dahlia Flowered Mixed—Pkt. 25c.

CALIFORNIA WILDFLOWER MIXTURE

A splendid mixture of true California annual wild flowers so blended as to give a succession of bloom from early spring to mid-summer. All colors may be found in this mixture. For best results the seed should be sown in a prepared seed bed. They may be planted from fall to early spring—a longer bloom resulting from the fall planting.

If you have a piece of ground you cannot irrigate, or have not time to give particular attention, yet you want to have something beautiful instead of unsightly weeds, we advise you to plant our California Wild Flower mixture. It contains twenty distinct species of wild flowers. One pound of seed is sufficient to plant an acre. Pkt. 10c, oz. 50c, ½ lb. \$3.00.

TO THE LOVERS OF CALIFORNIA WILD FLOWERS

We recommend to you a book entitled "Annotated List of Wild Flowers of California" by P. B. Kennedy, B. S. A., Ph. D., University of California, President of the California Botanical Society. It has just the information you want with you when you travel through the hills and valleys of California. Price at the counter is \$1.50. By mail \$1.60.

TREE AND SHRUB SEEDS

Most tree seeds should be planted during the winter and early spring months. Pine and Conifer seeds in March and April. Sow in boxes of well drained soil and keep in a protected place. A lath house is the best. Water in the morning to prevent seedlings from "damping off." When about two inches high, pot up and grow in pots until large enough to set out.

ACACIA—Soak seed in hot water 12 hours before planting.

A. Baileyana—30 ft. The most popular. A fast grower with glaucous green foliage. Pkt. 10c, oz. 40c.

A. Cultiformis—"Knife-leaved" Acacia. A fine shrub with glaucous green leaves. Height 15 ft. Pkt. 15c, oz. 50c.

A. Dealbata—40 ft. "Silver Wattle" finely cut foliage. Good for street planting. Pkt. 10c, oz. 40c.

A. Decurrens—50 ft. "Green Wattle." A rapid grower. Can be used as wind-break and is valuable for turner's work. Is rich in tannin. Pkt. 10c, oz. 40c.

A. Floribunda—30 ft. A pretty tree of pendulous habit, quick growth and constantly in bloom. Pkt. 15c, oz. 50c.

A. Latifolia—30 ft. "Golden Wattle." Ornamental; leaves long and rather broad. Does well on the coast. Pkt. 10c, oz. 40c.

A. Lopantha—30 ft. "Crested Wattle." Rapid grower and useful for temporary shelter. Grows in poor soil. Pkt. 10c, oz. 15c.

A. Melanoxylon—75 ft. A compact tree useful for street planting. Wood used in cabinet work. Pkt. 10c, oz. 35c.

ACER MACROPHILLUM—"California Maple." 75 ft. A native deciduous tree. Leaves large. Beautiful in autumn. Pkt. 10c, oz. 30c.

CAMPHORA OFFICINALIS—"Camphor Tree." 30 ft. An ornamental and attractive tree with shiny green foliage. Pkt. 10c, oz. 25c.

CEDRUS DEODARA—A beautiful evergreen of silvery green foliage, pyramidal form and drooping branches. Pkt. 15c, oz. 60c.

CERATONIA SILIQUA—"St. John's Bread" or "Carob Tree." A very ornamental compact growing tree. Thrives in any soil and will withstand drouth. The leaves are a dark, glossy green. Pkt. 10c, oz. 25c.

CRYPTOMERIA ELEGANS—"Fine leaved Japan Cedar." Fine foliage which turns red in the winter. A beautiful tree for the lawn. Pkt. 15c, oz. 50c.

CYPRESSUS MACROCARPA—"Monterey Cypress." 75 ft. Native of California. Extensively used for hedges and windbreaks. Pkt. 10c, oz. 30c.
C. Sempervirens—"Italian Cypress." A long-lived narrow tapering tree. Used in landscape gardening. Pkt. 10c, oz. 60c.

GREVILLEA ROBUSTA—"Silky Oak." A pretty tree with fern-like foliage. Orange colored flowers. Rapid grower and withstands drouth. Pkt. 15c, oz. 50c.

JACARANDA MIMOSAEFOLIA—30 feet. A fine tree with fernlike foliage, bearing clusters of light blue flowers. Pod contains 30 or 40 seeds. 5c. a pod.

JUNIPERUS CALIFORNICA—"California Juniper." A small tree with dark green foliage. Pkt. 10c, oz. 40c.
J. Virginiana—Red Cedar. 60 ft. A handsome well known tree. Pkt. 10c, oz. 35c.

LIBEOCEDRUS DECURRENS—100 feet. "Incense Cedar." A fine native tree of compact growth green foliage and red bark. Pkt. 15c, oz. 50c.

PINUS INSIGNIS—"Monterey Pine." Native of California, growing well near the coast. Pkt. 10c, oz. 40c.

MIXTURE OF PINES—Contains the best known varieties. Pkt. 10c, oz. 40c.

SCHINUS MOLLE—"Pepper Tree." A graceful well known tree with fine foliage and red berries. Pkt. 10c, oz. 25c.

MELIA UMBRACULTIFORMIS—"Texas Umbrella Tree." Deciduous. A well known shade tree. Withstands heat. Pkt. 10c, oz. 20c.



EUCALYPTUS SEED—Should be sown in June or July in thoroughly prepared seed beds or boxes. The beds should be kept moist at all times and watered only with a very fine spray. When seedlings appear water only in the mornings to prevent damping off. The seedlings should be transplanted when 2 or 3 inches high, to other boxes or small pots, and should be ready to set out in February and March. One pound produces about 20,000 seedlings.

E. Globulus—"Blue Gum." Most rapid grower and best known species. Grows well along coast. Wood is durable and also good fuel. A profitable tree to grow. Pkt. 15c, oz. 75c.

E. Rostrata—"Red Gum." A very tall variety. Withstands extremes of heat and cold. Grows most quickly in the hot sections. Is durable and useful for railway ties, etc., and also for cabinet work. Pkt. 15c, oz. 50c.

E. Rudis—"Desert Gum." Very valuable for hot arid sections. Wood durable. Good for street planting. Pkt. 15c, oz. \$1.00.

E. Tereticornis—"Forest Red Gum." Considered the best for general timber purposes. Grows well in hot and cold sections. The wood is unsurpassed for durability. Pkt. 15c, oz. 75c.

FRUIT AND NUT TREES

BITTER ALMOND—Per lb. 30c, postpaid.
MYROBOLAN PLUM—Per lb. \$1.00.

CALIFORNIA WILD WALNUT—Per lb. 25c, prepaid.

APRICOT—Per lb. 20c postpaid.

PEACH—Per lb. 15c, postpaid.

Write for quantity price on the above.

WILD SOUR ORANGE—Write for price. Delivery January to April.

PALM

All varieties may be sown in the open ground in mild climates except Cocos Palms. These latter require artificial heat. Some germinate quickly, others take as long as six weeks. Palms grow best in a well drained sandy loam.

CHAMAEROPS EXCELSA—"Windmill Palm." Leaves fan shaped, and deeply cut. The hardest palm we have, a fine lawn palm. Oz. 15c, lb. \$1.50.

COCOS AUSTRALIS—"Pindo Palm." A very ornamental palm with glaucous green leaves. Quite hardy. 10 seeds 15c. 100 for 75c.

COCOS PLUMOSA—A tall graceful palm, a rapid grower and a splendid variety for street planting. 10 seeds 20c, 100 seeds \$1.25.

ERYTHEA EDULIS—"Guadelupe Palm." 30 ft. A rapid growing variety. Fan shaped leaves of dark green. 10 seeds 15c, 100 seeds \$1.00.

PHOENIX RECLINATA—A graceful palm large and withstands cold. 10 seeds 15c, 100 seeds \$1.00.

P. CANARIENSIS—"Canary Island Palm." The most graceful and the handsomest of our hardy palms. Leaves pinnate and a green color. One of the most effective for lawn planting. 10 seeds 10c, 100 seeds 50c.

SEAFORTHIA ELEGANS—One of the most beautiful for conservatory or protected gardens. Quite hardy. 10 seeds 15c, 100 seeds \$1.00.

WASHINGTON FILIFERA—The well known California Fan Palm. Grows 60 to 80 feet. Always a bunch of leaves hanging close to trunk. Oz. 10c, lb. \$1.00.

WASHINGTON ROBUSTA—A hardy Fan Palm. Leaves dark green without any threads. Pkt. 10c, oz. 25c.



Washington Robusta

SEQUOIA GIGANTEA—"California Big Tree." The tallest of all trees. A beautiful pyramid tree. Pkt. 15c, oz. 90c.

S. SEMPERVIRENS—"California Redwood." A fast growing native tree with reddish colored wood. Ornamental. Pkt. 15c, oz. 50c.

STERCULIA DIVERSIFOLIA—"Victorian Bottle Tree." A fine tree for street planting. Glossy green foliage which varies in shape. Pkt. 15c, oz. 50c.

THUJA OCCIDENTALIS—"American Arbor Vitae." A good tree for planting in lawns. Bright green foliage, turns bronze in winter. Pkt. 10c, oz. 40c.
T. Orientalis—"Chinese Arbor Vitae." A small growing tree. Bright green flattened foliage. Pkt. 10c, oz. 25c.

A & M LAWN GRASS

The beautiful lawns of Southern California cannot be excelled anywhere in the world. In few places can a new home become so quickly surrounded with luxuriant vines, trees, shrubbery and flowers. This climate will accomplish more in one season than five seasons of Eastern climate. It is a pleasure to plant here, for there is something blooming all the year round. But it requires skill and intelligent aid to direct nature to produce a profusion of beautiful colors at all times.



A Velvet Lawn

A & M VELVET LAWN GRASS

The perfect lawn is only obtained by sowing a blend of several varieties suited to conditions and climate. The most beautiful lawns in California are made with A & M Velvet Lawn Grass. This well known Lawn Grass is blended to produce a closely interwoven velvety turf of fine bladed dwarf grasses. When seeded and watered properly it will be ready for cutting the first time in about twenty days from seeding and the tiny plants will immediately stool to a heavy turf of a bright velvety green. A & M Velvet Lawn Grass was blended by us after years of study and close observation of root growth and turf in our trial plots. It is particularly adapted to climatic conditions similar to California and the southwestern states except the extremely warm interior valleys. (Per lb. 90c, 5 lbs. \$4.25, 10 lbs. \$8.00.)

Interior Valley Lawns

For Imperial Valley and similar climates we recommend Bermuda Grass for the summer lawn and A & M Australian Rye Grass for October planting. After the Bermuda sod is established it may be raked and trimmed closely or the entire surface shaved off with a sharp hoe, after which A & M Australian Rye Grass should be seeded at the rate of 2 lbs. to 10x10 feet and covered with a light mulch of well rotted manure. The Rye Grass provides a green winter lawn which is replaced by the Bermuda sod as summer approaches, Bermuda being the only satisfactory lawn grass which will withstand the excessive summer heat.

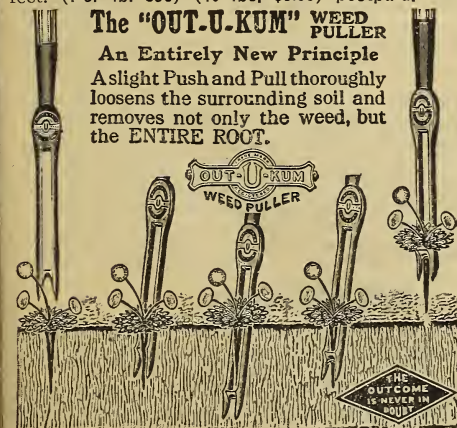
Bermuda (Per lb. 50c) (10 lbs. \$4.50) f. o. b. here.
Australian Rye (Per lb. 35c) (10 lbs. \$3.50) f. o. b. here.
Pacific Rye (Per lb. 45c) (10 lbs. \$4.00) f. o. b. here.

Chewings Fescue A very finely bladed lawn grass. This is the beautiful finely bladed grass that is largely used on putting greens. (Per lb. \$1.00) (10 lbs. \$9.00) postpaid.

Fancy Kentucky Blue Grass The purest and best lasting and beautiful effect. We sell only the finest quality of this seed. Write for prices.

White Dutch Clover Makes a showy effect much quicker than the Blue Grass. In conjunction with the Blue Grass, however, it forms the finest and closest turf. Write for prices.

Australian Rye Grass Is very strong and quick-growing, producing an immediate effect. (Per lb. 35c) (10 lbs. \$3.00) postpaid.



The "OUT-U-KUM" WEED PULLER

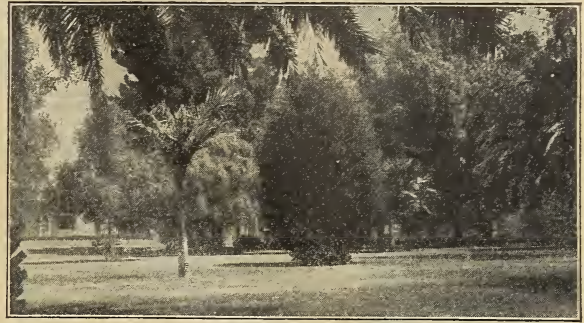
An Entirely New Principle
Aslight Push and Pull thoroughly loosens the surrounding soil and removes not only the weed, but the ENTIRE ROOT.

The Method of the "OUT-U-KUM" Weed Puller

is distinctly novel. It differs radically from all other weed pullers. The principle involved is the loosening and clearing of the surrounding soil.

Most weed pullers either cut the root, or grip and take hold of the weed above the ground. If the weed is sufficiently strong, it is torn loose but brings with it considerable surrounding soil. If not sufficiently strong, it breaks off at a point above the ground, leaving the root to flourish.

The OUT-U-KUM slips down into the soil alongside the weed, loosening the soil from that side. It then crosses under the root disengaging the latter, and finally, is drawn up the opposite side of the weed, loosening the earth at that side, and engages the head of the weed above the ground, the now thoroughly loosened weed being readily withdrawn in its entirety and with little or no clinging soil. Price \$1.00. Add 10c if wanted by mail.



A shady lawn

A & M Shady Lawn Grass

In many lawns there are shaded spots which are difficult to get sodded. To overcome this difficulty we blended a combination of fine dwarf growing evergreen varieties which in their wild or natural state are found growing in shady nooks or in the woods. This blend has been in use in California for a number of years and the demand for it has increased steadily among landscape gardeners who know the value of it. Sold in any quantity for the small lawn or the large private estates or parks.

(Per lb. 75c, 5 lbs. \$3.50, 10 lbs. \$6.50 f. o. b. here)

Lawn Rollers

The new water ballast lawn roller may be filled with water to any desired weight. 350 lb. and 500 lb. sizes. Ask for prices.

HOW TO MAKE A LAWN

ASK FOR OUR FREE BOOKLET

Soak the soil thoroughly to germinate all surface weed seeds. If a new home is being constructed, water ground freely while the house is under construction and keep the weeds pulled. This is very important for weed seeds are always present in the soil and if they are not germinated and pulled out before seeding the lawn they will give trouble later. The soil should be made mellow for a depth of 5 inches or more; deep cultivation allows deep rooting and this prevents the lawn being burned out under hot summer sun. The surface should be made perfectly smooth and level if possible, the top surface soil should be raked very fine and then rolled with a light roller. Stir surface very lightly with a light rake and sow seed with care, being sure all ground is covered light with seed then roll again. We do not advise raking in before the last rolling as seed is often thus covered too deep or bunched in places. If one desires, a light mulch of A & M Humus, pulverized manure or sand may be placed on the top after final rolling. Do not put any shavings on lawn. The first sprinkling after seeding is very important. Use a nozzle and apply a very light or fog spray until the surface is thoroughly soaked and the top soil set. Sprinkle twice daily in this manner until the green begins to show and then as often as is necessary to keep the soil in proper growing condition. Do not turn a stream on seed bed or wash sidewalks as this will wash seed especially away from edge of walk. Plant the A & M Velvet Lawn Grass at the rate of one pound of seed to 200 square feet of lawn. These few and simple rules if followed will give you a quick growing and satisfactory lawn.

Lawn Cultivator



For removing Bermuda Grass from lawns this tool does the work thoroughly and easily. It stimulates the growth of any Blue Grass or Clover that may be there. It also leaves a good seed bed in which to sow Velvet Lawn Mixture. Price without handle \$4.50. By mail \$4.65.

FERTILIZERS

WRITE FOR QUANTITY PRICE

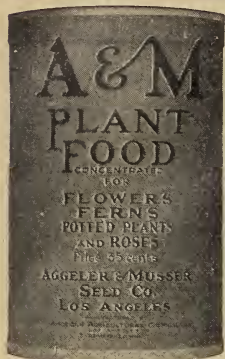
A & M PLANT FOOD

For Flowers, Ferns, Potted Plants and Roses

This concentrated plant food should be used by all who grow plants of any kind in pots, such as Ferns, hanging baskets, also for roses and in window boxes.

You have, no doubt, often noticed pale and sickly looking foliage on your plants. A & M Plant Food will restore the color and promote the growth.

It is packed in a convenient, sealed 2-pound package. Will not deteriorate after being opened and, very important, it can be kept in the house without discomfort. If covered, there will be no disagreeable odor. Per package, 35 cents., f. o. b. Los Angeles.



A & M LAWN AND GARDEN FERTILIZER

Quick and Lasting Results

A & M Lawn and Garden Fertilizer is a scientifically prepared chemical compound carrying the necessary elements for the promotion of plant growth.

It not only enhances the beauty of the blossom and the color of the lawn, but it is a wonderful stimulant to vegetable life, and, in addition to its many uses in the garden, it can be applied with wonderful results in the field for vegetables and other crops.

This fertilizer is easy to apply and it is in powder form and quickly available.

For the convenience of our customers we have it packed in 25-pound, 50 pound and 100-pound bags, priced as follows:

25 pounds	.....	\$1.10
50 pound	.....	2.00
100 pounds	.....	3.75

F. O. B. Los Angeles

SULPHUR

For All Purposes to Increase Crop Yields



Experiments conducted during the past few years by noted soil chemists and practical cultivators have revealed that sulphur:

1. Is readily utilized by plants as stimulating food.
2. It improves alkali soils by neutralizing the alkali which rises to the surface or which is carried in by the irrigation water.
3. Promotes nitrification: Dr. F. C. Reimer, in Oregon Agricultural Bulletin No. 163 says, "The various sulphur fertilizers have a very stimulative effect on the root system, increasing its size and the number of nodules. This is of great value in taking up larger quantities of plant food, moisture and atmospheric nitrogen."
4. Transforms latent potash and phosphates into available plant food.
5. Increases protein and feeding value of crops.
6. Destroys the spores of fungi and the larvae of injurious insects in the soil. Prevents Potato Scab, Wire Worms, Eel Worms or Nematodes, etc.

Drill into the soil two sacks per acre of "Toro Brand" specially prepared agricultural sulphur.

Time to Apply "TORO BRAND" should be worked into the soil in late fall and early spring in order to get the benefit of winter and early spring rains. However, in the irrigated districts it may be applied at any time of the year.

Price per sack of 110 lbs.: 1 sack lot \$5.50; 5 sack lot, \$5.20; 10 sack lot \$5.10; f. o. b. Los Angeles.

Fertilizers in Small Gardens

Amateur garden makers are often puzzled as to the amount of fertilizer needed for their small plots, because the usual directions give only the amount per acre. The following table shows (approximately) the proper proportions:

100 lbs. per acre	equals 1 lb. for a plot 10x43 feet.
200 lbs. per acre	equals 1 lb. for a plot 10x21 feet.
300 lbs. per acre	equals 1 lb. for a plot 10x14 feet.
400 lbs. per acre	equals 1 lb. for a plot 10x11 feet.
500 lbs. per acre	equals 1 lb. for a plot 10x 9 feet.

Agricultural Hydrated Lime

It supplies the element calcium to plants; it makes "sour soil sweet," changes an acid condition to a slightly alkaline one; it has the power to shrink clay and adobe soils, making a larger number of crumbs from a sticky mass; it prevents packing, baking and cracking, makes cultivating easier; it promotes the normal decay of organic matter in the soil, preventing the accumulation of poisonous matter; it promotes the change of nitrogen in organic matter into available nitrates, liberates and places at the disposal of plants potash and phosphoric acid already in the soil. It destroys fungus and the germs of insect life that infest the soil. Hydrated Lime, because of its fineness, high calcium contents concentrated condition, is the ideal agricultural lime and the most economical on the market. Use one-half less than other forms of lime. In cloth sacks weighing approximately 80 pounds. (4-lb. carton 25c) (Per sack \$1.50) Write for prices in ton and carload lots.

Special Potato Fertilizer of proven worth and so satisfactory that it has been used for years by the same growers with great success and with undiminished confidence in its value.

SULPHATE OF POTASH seems to have a direct action on the starch formation in Potatoes, and Potatoes with a higher starch content show better cooking qualities and generally they are of finer, smoother skin, more regular in size and of most excellent demand in the market.

The growing season of Potato plants is short, therefore the fertilizer, to do good, must be rapid and made of materials all of which are immediately soluble in water and capable of being assimilated by the plant when it starts to growing.

The analysis of our Potato Fertilizer is:

4% Nitrogen.
8% Phosphoric Acid
4% Sulphate of Potash.

All the materials are finely ground. No one can make a better fertilizer for Potatoes than we are recommending in this mixture, and it will pay you to use it.

Price: \$3.75 per 100 lbs.; \$35.00 per 1000 lbs. F. O. B. Los Angeles.

Tree and Vine A complete fertilizer that will give immediate results. Just the thing for trees, shrubs, vines and roses. Analysis, 3% ammonia, 8% available phosphoric acid, and 2% available potash. (Per 100 lbs. \$4.00) f. o. b. Los Angeles.

Fish Fertilizer This fertilizer is composed of dried fish, finely ground, and is purely organic. An excellent fertilizer for all crops. Will last for several crops without the need of other fertilizer. Write for prices.

Dried Blood Meal Is very rich in nitrogen and an excellent plant-food for increasing the yield of vegetables and fruit, and also for stimulating the growth of flowers. There is from 12 to 13% nitrogen. Write for price.

Bone Meal 3 1/2% nitrogen and 16% phosphoric acid. Neither of these two elements are immediate in their action. If put in the soil in the Fall, some results will show the following Spring. Slow but sure. Write for price.

Nitrate of Soda Contains about 15% nitrogen. Is very quick in action and entirely soluble. Is best applied after the plants are growing. Price fluctuates. Write for prices.

Leaf Mould Excellent for mixing with soil for potted house-plants, especially ferns of all kinds. (per sack \$1.25) f. o. b. Los Angeles.

Gypsum This is not a fertilizer, yet it has an indirect fertilizing value, which is mainly due to the fact that it has the power of changing unavailable forms of plant-food, especially potash, into available forms. A heavy dressing of Gypsum will greatly improve any heavy soil, rendering it lighter and more easily cultivated, and relieve the tendency to crust and bake. If your soil contains alkali or is sour, use Gypsum. (Per 100 lbs. \$1.25). Write for quantity prices.

Sheep Manure For lawns, gardens, window boxes, potted plants and flower beds. (Per 10 lbs. 50c) (50 lbs. \$1.10) (100 lbs. \$2.00) f. o. b. Los Angeles.

A & M Humus

INSTRUCTIONS.—In order to get quickest and best results with A & M Humus is to mix it with the soil and give it a thorough soaking after which pulverize it again as soon as it is tillable, it is then ready for the seed.

A soil filled with Humus will resist drouth much better than one without Humus.

Price: (50 lbs. \$1.50) (100 lbs. \$2.25) (500 lbs. \$9.00) (1000 lbs. \$16.00) (ton \$30.00.)

All Year Treatment Against Insects and Disease Enemies of Garden and Grove

For prices and list of insecticides refer to insecticide page. Your particular attention is directed to Nico Dust Preparations and Sherwin Williams Insecticides for the control of garden and orchard pests. These preparations are used extensively by experienced growers and are highly satisfactory.

ROSES

Rose Aphis In spring and summer spray with solution of fish oil soap and water, or one part Kils-All to twenty parts of water.

Rose Scale and Fungus Spray with solution one part Spru Mulsion to ten parts water.

Thrip Spray with one part Kils-All to twenty parts water.

Mildew Spray with Fungi-Bordo. Follow directions on package.

HOUSE PLANTS

Fertilizing Apply a teaspoonful of A & M Plant Food once a week. Do not allow the plant to stand in water. Give it plenty of fresh air and sunshine.

Fern Scale Spray with Kils-All. The best time is during the cool of the evening. Do not set the plant in the sun immediately after spraying.

VEGETABLES

Asparagus Rust Spray with Dry Lime Sulphur or Fungi Bordo. Use according to directions on package.

Scant Foliage Indication that soil is worn out. Apply A & M Lawn and Garden Fertilizer.

Green Worm On cabbage and cauliflower. Dust with Hammond's Slug Shot.

Cut Worms Mix 1 lb. Paris Green in 10 lbs. of bran. Add one quart black strap molasses and two lemons chopped fine. Mix the whole to a crumbly mass and scatter in the field.

Grass Hoppers Same as for cut worms.

Mildew on Peas Spray with Fungi Bordo. Follow directions on the package.

Potato Diseases For scab and other fungi on potatoes, dip the tubers in a solution of one pint formaldehyde and 25 gallons of water allowing them to soak two hours. See potato page 42.

Tuber Moth and Blight Moths enter the soil thru cracks. Keep the potatoes well hilled and spray with Tuber Tonic.

Tomato Worms Pick off by hand or before fruit is half grown. Spray with Arsenate of Lead solution three to four level tablespoonfuls to one gallon of water.

Tomato Blight Spray with Fungi Bordo, using according to directions on the package.

Slugs Spray with Kils-All or dust with Hammond's Slug Shot.

Melon Blight Spray the hill freely with Fungi Bordo so that the liquid will follow the stem several inches below the surface. This should be done as a precaution as well as for a remedy.

Nematode Plant the infected land to Barley or Grass for three seasons. Stir the soil deeply and keep free from weeds. Apply Toro Sulphur two sacks per acre or 1 pound per 100 square feet.

Cucumber Beetle Spray with S. W. Dry Arsenate of Lead or dust with Nico Dust.

Onion Thrip Spray with Kils-All. Follow direction on package.

Melon Aphid Dust with Nico Dust. Full information on insecticide page.

Your 1921 book was so full of useful information that I can not get along without another.

Every farmer can learn something of value by carefully following your advice.

H. H. CONNOR, Calif.

CITRUS TREES

The Scales For black, red, yellow, purple, greedy and soft scale spray with Kils-All or Spru-Mulsion 3-4 lb. Dry Lime Sulphur 3-4 lbs., water 10 gallons.

Mealy Bug Use Kils-All according to direction on the package.

Red Spider Dust with Nico Dust. Full information on insecticide page.

Aphis Dust with Nico Dust. Full information on insecticide page.

Gum Disease and Scaly Bark Apply Fungi Bordo to the lower branches, trunk and surface roots at base of tree.

DECIDUOUS TREES

San Jose Scale Also Leaf Blister Mite, Peach Leaf Curl and Red Spider. Spray dormant trees with solution of ten tablespoonfuls of Dry Lime Sulphur to one gallon of water. For summer spraying use 3 tablespoonfuls to one gallon of water.

Pear Blight Cut out every appearance of the disease on twigs, branches or trunk well down into healthy wood. Disinfect the shears after each cut.

Woolly Aphis Also Black Peach Aphis, spray with solution 1 oz. Black Leaf 40, 1½ lbs. Fish Oil Soap to seven gallons of water. Soak the same solution into soil over the roots.

Peach Borer Dig the borer out with a sharp pointed knife and cut the tree back heavily.

Codling Moth After first bloom has fallen and before the calyx cups are closed spray with solution of one pound S. W. Arsenate of Lead to one gallon of water.

Climbing Insects To prevent ants and other insects from entering trees, apply Tree Tanglefoot.

MISCELLANEOUS

Ants Apply Buhach Powder in the hill for large red ants and along the run of the small house ant. Buhach powder is non-poisonous and may be used in the house to eliminate ant troubles.

Mealy Bug This insect may appear in vegetables, shrubs or trees. Use Kils-All.

Snails Spray with Kils-All or dust with Slug Shot.

Flies For flies on cattle or horses spray the animal with Dr. Hess' Fly Chaser.

Chicken Lice Dr. Hess' Instant Louse Killer.

Gophers Use Gopher-Scent. They like it and it does the work.

Ground Squirrels Gas Balls are more effective than any remedy we know of.

Moles Rittenhouse Mole Trap.

Swat the Bug

Crop Losses Amount to Millions

The Plant Disease Survey Office of the U. S. Department of Agriculture has just made public figures on crop losses in 1920 in the United States, caused by plant diseases:

Corn—220,862,000 bu., or 6.39% of the year's crop.
Sweet Potato—39,150,000 bu., 25.8% of the crop.
Dry Beans—404,000 bu., or 4.3% of the crop.
Peaches—10,505,000 bu., or 19.4% of the crop.

Apples—7,474,000 bu., or 16.5% of the crop.
The yield of sweet potatoes was reduced 1,657,000 bu. in North Carolina, due to Black Rot; in Mississippi, 1,654,000 bu., and in Alabama, 1,180,000 bu., while Stem Rot caused a reduction of 538,000 in Virginia, 511,000 bu. in New Jersey, and 236,000 bu. in Alabama.

Anthraco-nose was the cause of a loss of 155,000 bu. of dry beans in New York State, and in Michigan 111,000 bu. were lost from bacterial blight.

Fusarium Wilt of tomatoes is reported as responsible for a 65% reduction of the crop in Georgia, 25% in Louisiana, 20% in Alabama, while Septoria Blight caused a reduction in Maryland, 30% in Virginia, and 15% in Kentucky, while somewhat smaller reductions in other tomato growing states.

After reading these figures can you doubt the necessity for every orchardist, rancher, gardener, and every one having even a small garden, being prepared to destroy insects and disease that rob you of such a large per cent of your crops.

Look over our list of insecticides and sprayers you will find the things best suited to your purpose.

SWAT THE BUG.

Sherwin-Williams Insecticides

Will Insure You Better Fruits and Vegetables

Sherwin-Williams Insecticides Will insure you better fruits and vegetables.

Notice Poisonous insecticides cannot be sent by mail. Many insecticides are not dangerously poisonous. Some are in liquid form, put up in tins or glass; to send these by mail, extraordinary care must be given to the packing, which necessarily adds much to the weight and therefore to the postage which may seem out of proportion to the purchase price.

On bulky items where the postpaid price is not mentioned, we prefer to send by express, and shall do so unless requested to do otherwise.

If wanted by parcel post, add sufficient money to cover postage. Estimate liquids plus package at the rate of 4 pounds to the quart, or 14 pounds to the gallon. See parcel post rate on inside of front cover page.

Prices fluctuate and are subject to market changes.

"To successfully grow fruit and vegetables, it is necessary to be prepared at all times to combat and control the destructive insects and diseases which are classified in three distinctive classes; namely, leaf-eating and chewing insects, leaf-sucking insects and fungus diseases.

Different control measures are used in combating each type of insect and disease as above mentioned.

Complete information from our best authorities on this subject has been secured and may be obtained in book form free. Write for our S. & W. Sprayers Manual.

Owing to the necessity of combating against all kinds of insects and plant diseases we have given more careful instructions than in previous years.

See our insecticides and our sprayers and dusters. You will find them to suit every purpose for the back yard gardener or for the market gardener, orchardist, rancher or stockman. Sprayers to suit every occasion.

Sherwin Williams Dry Powdered Arsenate of Lead

Because of its unusual lightness, stays thoroughly in suspension during spraying operations, thus giving the spray uniform strength. May be used as a wet spray or dusting. For the control of Codling Moth, Cabbage Worms, and all leaf eating and chewing insects.

Directions: One to one and one-half pounds to fifty gallons of water. Or three or four level tablespoonfuls to one gallon of water. For dusting use with five or six parts powdered Lime. (½ lb. 30c) (1 lb. 70c) (5 lbs. \$1.75.) Cannot be sent by mail.

Sherwin Williams Fungi-Bordo (Bordeaux Mixture)

In powdered form, mixes perfectly with cold water. For peach, tomato and potato blight all fungus diseases.

Directions: Use seven to nine pounds to fifty gallons of water. Or seven to eight tablespoonfuls to one gallon of water. (1 lb. 35c) (5 lbs. \$1.50) (25 lbs. \$5.00). Write for quantity price. Cannot be sent by mail.

Sherwin Williams Dry Lime-Sulphur

The use and success of Lime-Sulphur solution is known to practically every fruit grower in the country. Sherwin-Williams Dry Lime-Sulphur is standard Lime-Sulphur solution in dry powdered form—the first and only one of its kind in the market. It has all the advantages of the liquid material, but eliminates the disadvantage of heavy freight charges, loss from evaporation and leakage; also the inconvenience of handling a heavy and bulky barrel. Its effectiveness has been proven by a number of years of use by large fruit growers and practically all Experimental Stations.

It will control San Jose Scale, Leaf Blister mite, Peach Leaf curl and red spider.

Directions for use is spraying dormant trees. Use from ten to fourteen pounds to fifty gallons of water for eight to ten tablespoonfuls to one gallon of water. For summer spraying against fungus diseases on all stone fruit, use two and one-half to three pounds to fifty pounds of water. (1 lb. 25c) (5 lbs. \$1.00) (10 lb. pkg. \$1.70) f. o. b. Los Angeles. Write for quantity price. May be sent by mail.

Sherwin Williams Paris Green has by years of use proven its quality. It has become the standard Paris Green everywhere. It is light and fluffy, insuring good suspension in the spray tank and thorough covering of the foliage; contains approximately 56% arsenious oxide and less water soluble arsenic than is allowed by law. It is one of the safest and most effective Paris Greens on the market today.

Directions for use: Four to six ounces to fifty gallons of water. Or two teaspoonfuls to one gallon of water. For cut worms and grasshoppers add one tablespoonful of Paris Green to ten pounds of bran and spread about the base of the plants. It is always well to add ¼ lb. Paris Green to each barrel of Bordeaux when spraying tomatoes. (¼ lb. pkg. 40c) (½ lb. 70c) (1 lb. 90c.) Write for quantity price. Cannot be sent by mail.

Sherwin Williams Pruning Compound

Will aid nature in healing wounds without retarding the growth. Has special disinfectant qualities. The compound is ready for use. Cover all cuts at once; use stiff brush or cloth to apply. (1 qt. 75c) (1 gal. \$2.25) May be sent by mail.

For Aphides and All Sucking Insects Use

"BLACK LEAF 40"

Nicotine Sulphate—40% Nicotine

Price Postpaid

1 oz. 35c—makes 6 gals. spray.
½ lb. tin—\$1.25—makes 40 to 120 gals. spray.
2 lb. tin—\$3.50—makes 160 to 500 gals. spray.
10 lb. tin—\$13.50—makes 800 to 2,500 gals. spray.

Anchor Brand

For Dry Dusting of Trees, Vines, Etc., Bleaching Fruit, Etc.



It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards six times they will not be affected by Mildew or Red Spiders and rust.

Anchor Brand Velvet Flowers of Sulphur, packed in double sacks, is the fluffiest and purest sulphur that money can buy; the best for vineyards; the best for bleaching purposes, leaving no ash.

Try our new brand ventilated Sublimed Sulphur—Impalpable powder, 100% pure, in double sacks, for dry dusting and making paste Sulphur.

(Per 110 lb. sack \$5.40) (5 sack lots \$5.35 per sack) f. o. b. Los Angeles. Write for quantity prices.

Diamond S Brand For Lime-Sulphur Solution

For Lime-Sulphur Solution, use our Diamond "S" Brand Refined Flour Sulphur. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men \$4 per day for making the solution and applying the same.

Send for circulars No. 6, No. 7 and No. 8, for information from prominent growers and horticultural commissioners; and booklet "The Truth About Sublimed Sulphur." (Per 110 lb. sack \$3.80) (5 sack \$3.75) per sack.

Toro Brand (See Fertilizer)



INSECTICIDES—Continued

Rosin Spray Effective for black, red, yellow, purple and citricola scale, mealy bugs, wooly aphids, black peach aphid and plant lice. Recommended by the Horticultural Commission. Dissolve 1 lb. of the spray in 2½ gallons of either hot or cold water and thoroughly mix before spraying it on trees or plants. (1 lb. can 35c) (2 lbs. 50c) (3½ lb. can 95c) (40 lb. can \$5.50) f. o. b. here.

Tobacco Dust For aphids and small insects in plant beds and poultry houses. (lb. 20c) (10 lbs. \$1.50) Cannot be sent by mail.

Tobacco Stems For fumigating green-houses and chicken nests. (10 lb.) (by mail 20c per lb.) Write for quantity price.

Tree Tanglefoot (Paste). This is a sticky substance applied to the bark of trees to protect them from all climbing insects and also rabbits. It will prevent ants from entering the trees. One application is good for three or four months. (lb. cans 60c) (3 lb. \$1.50) (5 lb. \$2.75) postpaid.

Whale Oil Soap (Fish Oil). This is not only an excellent insecticide for killing plant lice and fungus growth, but should be mixed with most all liquid sprays as it causes the spray to adhere much better to the leaves. (1 lb. 25c) (5 gal. cans 18c lb.) May be mailed.

Blue Stone (Sulphate of Copper). Applied in time it will prevent mildew and all fungus diseases. Also prevents smut on barley and wheat, by soaking seed to be planted in a solution of 1 lb. to 6 gallons of water for ten or fifteen minutes. (Per lb. 30c) (40 lb. can \$8.40 f. o. b. here) May be sent by parcel post.

Carbolic Acid, Crude (1 qt. cans 60c) Cannot be sent by mail.

Carbon Bi-Sulphide (Liquid) For exterminating gophers, squirrels, ants or any vermin that live under the ground. Saturate cotton or other absorbent, put deep in hole and close all openings. For ants, pour into the openings. For weevil in grain, put grain in air-tight chamber; for 100 cubic feet of space use ½ pint Carbon Bi-Sulphide, saturate it into any absorbent so that it will evaporate quickly; close the chamber tightly for three or four hours. It is not necessary to remove the grain from the sacks. Notice: It is very combustible. Do not smoke or have fire near while handling. (Pint 40c) (½ gal. 60c) (1 gal. \$2.25) Cannot be sent by mail.

Formaldehyde (Liquid). For destroying the germs of smut on grain, scab and rhizoctonia on potatoes. Dilute one pint in forty gallons of water, submerge potatoes one and one-half hours and grain only long enough to moisten it. (½ pint 45c) (1 pint 75c) (1 qt. \$1.50) Cannot be sent by mail.

Hammond's Slug-Shot (Powder). Destroys bugs, insects and worms on melons, lima beans, cucumbers and tender plants. Also for use on asters, roses and flowering plants. Easily distributed by duster or in water by spraying 1 lb. to 10 gallons of water. Not injurious to persons or animals. May be sent by mail. (lb. 40c) (5 lbs. \$1.25) postpaid.

Kils-All Is a new insecticide which has been thoroughly tested for several years and by thorough experiments we have found it to be the best remedy we have ever tried for Mealy Bug, Thrip, White Fly, Wooly Aphid, Red Spider, Soft Shell Scale and Black Aphid. It may be used on the most tender greenhouse plants, according to directions, without burning the foliage. (½ lb. cans 60c) (1 lb. cans 95c) (5 lb. cans \$3.25) (40 lb. cans \$20.00 f. o. b. here.) May be sent by mail.

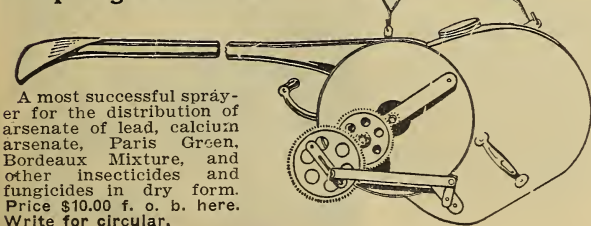
Lime Hydrated This is a fine powdered Lime, slacked by steam. Mixed with water, this makes an excellent preparation for whitewashing and disinfecting of all kinds. (4 lb. cartons, 25c each) (80 lb. sacks \$1.50) May be sent by mail, postage extra.

Sulphur As an insecticide is used for the control of Red Spider and Mildew. Is used extensively on vines and vegetables. The Sulphur we have to offer is the purest that money can buy. We offer three brands, but would recommend Anchor Brand for dusting, Diamond Brand for Bordeaux paste, the Toro Brand for fertilizer and to destroy any germs or Microzoa that may be in the soil:

Anchor Brand—110 lb. sack \$5.40; 5 sacks lots, \$5.35.
Diamond Brand—110 lb. sack, \$3.80; 5 sack lots, \$3.75.
Toro Brand—110 lb. sack \$5.50; 5 lb sack lots, \$5.20.

F. O. B. Los Angeles

Springfield Duster



A most successful sprayer for the distribution of arsenate of lead, calcium arsenate, Paris Green, Bordeaux Mixture, and other insecticides and fungicides in dry form. Price \$10.00 f. o. b. here. Write for circular.

NICO DUST INSECTICIDES

THESE PRICES ARE F. O. B. LOS ANGELES

These preparations are in the form of a dry powder or dust, which is applied with a blower, thus affording a material saving in time, labor and expense. The discomforts as compared with liquid spraying are practically none.

"NICO DUSTS" are carefully prepared and have made possible the control of a large number of insects which have heretofore been difficult to eradicate.

Various pests require various strength of "Nico Dusts" to effect the proper killing, and each mixture is prepared from proven formulae which is the result of several years of research work. We are prepared to supply large quantities on short notice and our stock is always fresh.

Nico Dust No. 5

Is made especially to exterminate peach aphid, pear aphid, prune, onion, and orange thrip and similar insects. (5 lbs. \$1.75) postpaid (25 lbs \$6.00) (100 lbs. \$18.50 f. o. b. here.)

Nico Dust No. 6

A very strong mixture made especially for cantaloupe aphid. Large quantities of No. 6 are used successfully in the Imperial Valley and other melon growing districts. (5 lbs. \$1.90) postpaid (25 lbs. \$6.50) (100 lbs. \$22.50) f. o. b. here.

Nico Dust No. 10

Especially prepared for aphid, garden beetle, cucumber beetle, cabbage worm and other similar insects which are difficult to eradicate. (5 lbs. \$2.75) postpaid. (25 lbs. \$8.00) (100 lbs. \$30.00) f. o. b. here.

Nico Garden Dust

Prepared for the home garden where fruit trees, roses, sweet peas and general garden truck are grown. For the control of insects, mildew, leaf cutting insects and other pests commonly found in the garden. (8 oz. carton 50c) (2 lb. pkg. \$1.40) (5 lbs. \$2.75 postpaid.)

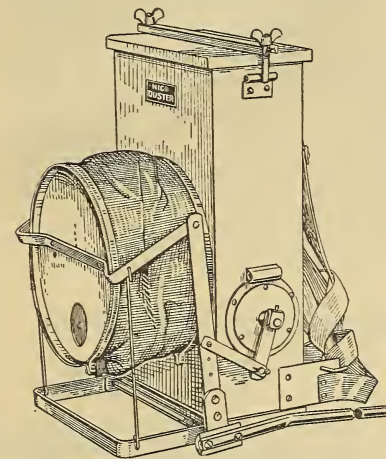
Nico Duster

The best duster for heavy work.

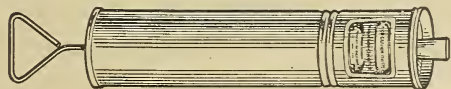
The Nico Duster is specially designed for use in large orchards, vineyards and cantaloupe acreage. Hundreds of them are now being used successfully in fruit and vegetable growing sections. Because of its bellows capacity it may be used where no other knapsack duster can reach. It is built on correct principles and has been used under the most severe conditions, delivering a fine effective dust without waste.

The 1922 model includes all the advantages of any other duster together with

other improvements which makes it the most satisfactory and economical duster on the market. Price \$17.00 f. o. b. Los Angeles.



Nico Garden Duster

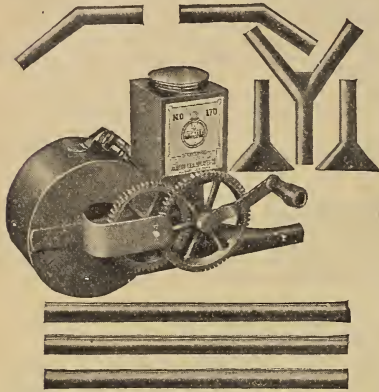


This is a medium-sized duster for use in the home garden. It is very effective in applying Nico Garden Dust in places that are difficult to reach with any other duster. If you have any dusting at all to do this little gun will please you. (Each \$1.00) f. o. b. Los Angeles.

POWDER DUSTERS—Continued

Many insects and diseases can be destroyed more conveniently with a powder. For that purpose we have a complete line of dusters to suit your particular convenience.

Utility Duster No. 170

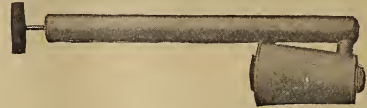


Used for the application, in dry form, or spray chemicals, as Arsenate of Lead, Paris Green, etc. Made of heavy tin enameled red; iron and brass machine cut gears used throughout, and so arranged as to give a steady and uniform delivery. Fan is $3\frac{1}{2}$ by $6\frac{1}{2}$ inches, larger than on other dusters of similar construction. The hopper holds more than a quart. The position of feed valve in bottom of supply hopper is shown by indicator on fan box.

The duster exclusive of the tubes is 14 inches long, 6 inches wide and $9\frac{1}{2}$ inches high; it weighs with connection and two large nozzles with wide spread, and an adjustable carrying strap. All points in the pipe line lock securely, no loose joints as on other makes of dusters.

Shipping weight, 8 pounds. Price \$10.00 f. o. b. here.

Complete equipment about 6 pounds. It is provided with three 1-inch by 14 inch tubes, two 45-degree and one Y, or two-way connection and two large nozzles with wide spread, and an adjustable carrying strap. All points in the pipe line lock securely, no loose joints as on other makes of dusters.



LOWELL'S POWDER SPRAYER

A successful hand sprayer for sulphur and all powder disinfectants. Capacity one quart. The cheapest and best small powder sprayer on the market. Just right for home gardens. Price \$1.00. Wt. 3 lbs.



Sulphur Duster
 $\frac{1}{2}$ gal. 60c; b
mail 70c



Jumbo Powder Blower

To eradicate fleas, bedbugs, etc., use this blower. Also excellent for dusting house plants. By mail 50c.

Gopher and Squirrel Exterminators

All Prices F. O. B. Los Angeles. Poisons Must Go by Express. Add Postage if Traps are to be Sent by Mail.

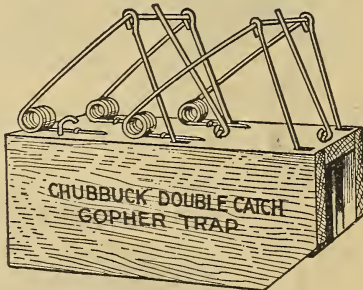


Eureka Squirrel Exterminator

With the use of carbon bi-sulphide, this is the best and cheapest implement with which to eradicate the squirrel pests on your land. We can confidently recommend the use of this machine in vineyards, orchards, grain fields, pasture lands, etc. It is of simple construction, best galvanized sheet steel with bellows attached. The working of the bellows causes the carbon bi-sulphide in the machine to generate a gas, which is forced into the burrows of the squirrels, thus killing them instantly. The exterminator forces no liquid into the runs, only the gas, thereby saving 75% of the carbon bisulphide, over the old way of saturating balls of cloth or cotton. A colony of squirrels can soon destroy \$50.00 worth of vegetation. Price \$14.00 f. o. b. Los Angeles. Weight, crated 12 lbs.

Chubbuck Double Catch Gopher Trap

This is the latest and surest Gopher Trap on the market. Catches either large or small gophers. And very often when the gopher is working the dirt ahead of him the trap is sprung catching him by the outer springs. Price 50c.



Macabee Gopher Trap



Easy-Set Mole Trap

Macabee Gopher Trap

This is the most convenient gopher trap yet manufactured. It is easy to set, small and can be extended far down into the hole. Price postpaid, 30c.

Box Gopher Trap

This trap is used extensively by gardeners. Is easy to set and sure. Price by mail 40c.

Easy Set Mole Trap

Catches them going and coming. A child can set it with perfect safety. Price \$1.25 f. o. b. here.

Gopher Scent

Gopher Scent is the latest and most improved method of poisoning gophers and squirrels. The scent attracts the gopher and draws him to the bait. We have had some wonderful reports on Gopher Scent and feel that we cannot recommend it too highly.

(Small pkg. 35c)
(medium size 50c)
(large size \$1.00) (15 lb. pkg. \$6.00) (85 lb. keg \$29.75) f. o. b. here.

Poisons cannot be mailed.

Swat the Pest

The damage done to Horticulture and Agriculture by squirrels and gophers runs into millions of dollars annually and often means ruin to the rancher to say nothing of the disappointment and aggravation to the home gardener. Swat the Pest.



Gopher-Gas Balls Are used by lighting and rolling into the burrows of the gopher, the same as the Gopher Candle. (Per doz. 60c) (Box of 125, \$3.75.) postpaid. Can be sent by mail.

Squirrel Poison—Moore's (Grain). A certain and specific destruction of gophers, squirrels, crows and mice. (Small size 50c) (Medium size \$1.20) (Gallon-size \$1.90) (5 gallon drums \$5.50).

SPRAYERS FOR EVERY PURPOSE

A & M Superior Utility Sprayer



Utility Sprayer

This sprayer is made of heavy galvanized iron or brass, all seams sweated and riveted, tested at 95 lbs.; tank equipped with standard hose connections, capacity 3½ gallons. The pump cylinder is made of heavy brass tubing, with bronze ball check valve contained within a thin brass cage, which does not deteriorate like rubber. The nozzle is made of brass and can be adjusted to be operated at any desired distance by three-eighth inch connecting rod. This sprayer is especially adapted for spraying trees, poultry houses, cut-buildings, barns, and vegetables of all kinds. By reason of the ball bearing check valve, any insecticide or acid may be used safely in this pump without danger to the valve. This pump is the dairymen's friend. Packed, one in a box, shipping weight 10 lbs. Price: galvanized, \$8.00; brass \$11.00 f. o. b. Los Angeles.

Utility No. 40 Portable Outfit

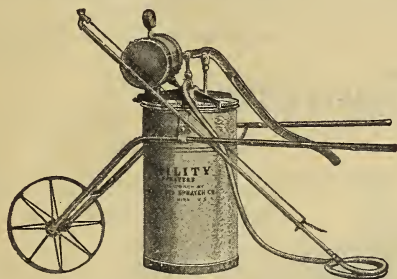
Very useful for painting, whitewashing, nad disinfecting warehouses, factories, barns, trees and greenhouses.

TANK larger than most similar outfits, made of heavy galvanized iron. A fine strainer at suction end prevents sediment getting into working parts of pump.

FRAME substantially built of steel, well braced and balanced.

Equipment:—Capacity 18 gallons; 10 feet ½ inch 5-ply spray hose, 4-foot spray rod; 1 patented Utility Angle Nozzle No. 65. Shipping weight complete, crated 85 pounds.

No. 40—Portable Outfit. Price, each \$35.00 f. o. b. Los Angeles.



UTILITY NO. 40A PORTABLE OUTFIT

Same in construction as our No. 40, but equipped with an air pressure tank mounted on pump casting. This makes a one-man outfit. By obtaining 250 pounds pressure considerable spraying can be done without pumping.

Equipment same as with No. 40.

Shipping weight, complete, crated, 100 pounds.

No. 40A—Portable Outfit. Price each, \$45.00 f. o. b. Los Angeles.

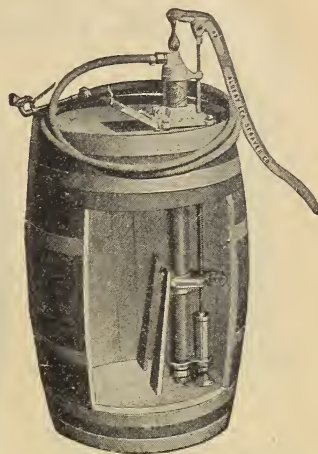
Utility Barrel Pumps

Cylinder is made of heavy brass, 2¼ inches in diameter. Brass plunger can be adjusted without removing, having special treated cotton wick packing to prevent corrosion by chemicals. All working parts that come in contact with liquids are brass. Bronze ball valves easily removed. Pressure of 150 to 200 pounds can be maintained.

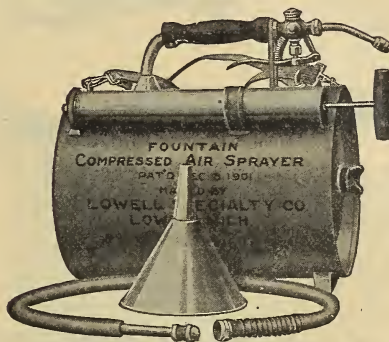
In complete outfits we furnish our patented Utility adjustable nozzle which always gives control of spray at nozzle end. A fine strainer avoids sediments getting into working parts.

Utility No. 50-A—2¼ in. cylinder complete as shown in cut. Without Barrel—Price \$22.50, f. o. b. here. Weight crated 50 lbs.

Utility No. 90A, 1½ in. cylinder without barrel, \$17.00 f. o. b. Los Angeles.



Lowell Compressed Air Sprayer



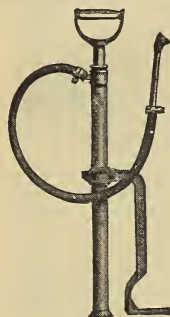
Lowell Compressed Air Sprayer

Has stood the test fifteen years. The tank is made of heavy steel or brass, holding three gallons. The discharge pipe extends down through the tank to the bottom of the solution. The pump is located on the outside of the tank and the valve does not come in contact with the insecticides or acid used in spraying. This is the all-purpose sprayer. Price: galvanized \$8.00, brass \$11.00, f. o. b. Los Angeles. Weight 20 lbs.

Bucket Pump, No. 95

All working parts of this pump that come in contact with spray solutions are brass. By removing variable disc a straight stream can be had for washing windows, automobiles, etc., in addition to general spray purposes.

This is a double action pump, the air chamber being provided by the hollow plunger rod of ¾-inch tubing. Body of pump is 1¼ by 19 inches, made of heavy seamless brass tubing. Pump is equipped with 2 feet of ½-inch, 5-ply hose and 12 inches of ¼-inch pipe and our No. 80 angle service nozzle. The brass parts are highly polished and laquered; the handle and foot rest are painted a rich carmine red. Wt. 6 lbs. Price \$6.00 f. o. b. Los Angeles.



Utility No. 95



Looking toward San Fernando Valley from the home of the Hollywood Country Club. The greens and fairway in the foreground are evidence that our grass mixture is entirely satisfactory.

SPRAYERS—Continued

Perfection Compressed Air Pump

The tanks are made of heavier metal than has ever been used in sprayers of this kind, making the tank practically unbreakable. The pump is 1½-inch seamless brass tubing with a brass valve, and is sealed into the top of the tank with heavy threads following the construction used in the best makes of fire extinguishers.

This sprayer will handle Whitewash, Water Paints, Bordeaux Mixtures, etc., perfectly.

For whitewash and all heavy mixtures it is necessary to use a "W. W." Cap in nozzle, which is furnished with sprayers. These sprayers are made in galvanized steel or brass as ordered. Equipped with 4 feet of hose. Weight, packed, 14 lbs.

Galvanized Steel\$7.50
All Brass\$10.50
3 ft. brass extension rod\$1.00

F. O. B. Los Angeles



Wagon Spray Boom

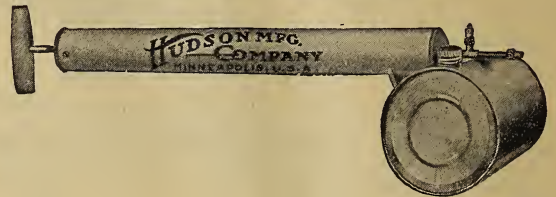


This boom can be used with any good barrel pump, but gives the best satisfaction in connection with our No. 50A. It is light, strong and adjustable to every position. Will throw spray at any angle and can be folded so that you can drive thru narrow

gates and can be set to spray between rows of grape vines, etc., two nozzles spraying to the right and two to the left. One barrel of liquid will cover three acres. A ten-year-old boy can operate it. The cheapest and best method of spraying a field

Price \$11.00 f. o. b. Los Angeles.

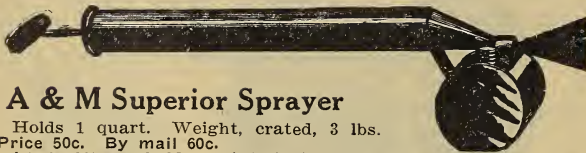
Continuous Sprayer



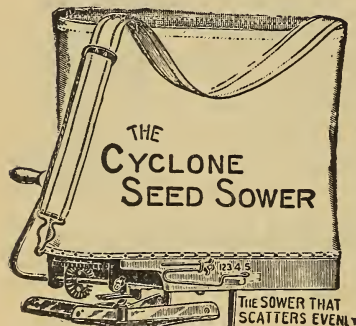
A & M Superior Sprayer

Holds 1 quart. Weight, crated, 3 lbs.
Price 50c. By mail 60c.

Little Midget holds 1 pint; is just the sprayer for home use.
Price 40c. By mail 50c.



Seeders and Planters

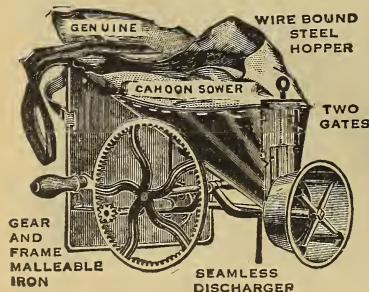


Cyclone Seed Sower

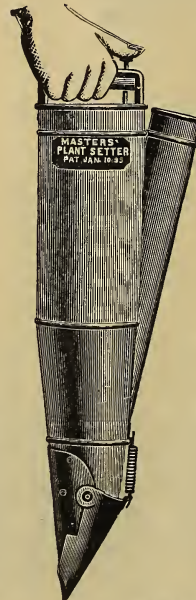
Cyclone Seed Sower

This Seeder is equipped with the following important features: Sloping feed board, automatic feed adjustment, distributing wheel, triple gears. Weight, 5 lbs. Price \$3.00.

Hand Seeder and Planter



The Standard Sower acknowledged to be superior to all other hand sowers. Gives perfect satisfaction, and can be used for sowing alfalfa and grains broadcast. Sows from four to eight acres per hour at a common walking gait. A saving of four-fifths of the labor and one-third of the seed by its use. A person entirely unaccustomed to sowing by hand can use this machine with perfect success. Price \$6.00 f. o. b. here. Weight crated 8 lbs. Can be sent by mail.



Master's Plant Setter

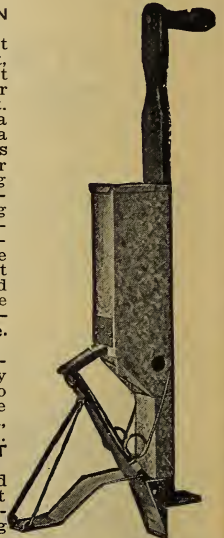
SEGMENT CORN PLANTER

The lightest, most accurate, strongest, cheapest and most up-to-date Planter on the market. Never cracks a kernel nor skips a hill. It is always in position, never makes a wrong move. Many gardeners are using this for their re-planting, and melon growers are using it to plant watermelons and cantaloupes. (See picture). Price—\$2.00 f. o. b. here. Weight, 5 lbs.

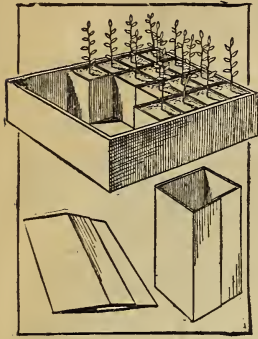
Ask for anything you may want pertaining to garden tools; we probably have it, although not listed. MASTER PLANT SETTER

The only hand mechanical plant setter on the market. No stooping when using it, therefore no lame backs. All kinds of plants—Cabbage, Tobacco, Tomatoes, Cauliflower, Strawberries, Sweet Potatoes, etc., are set in water and covered at one operation. Weight 10 lbs.

Price—Each \$6.00 f. o. b. here. Ask for circular. If there is a new comer in your neighborhood kindly send us his name that we may mail him this catalog.



Segment Corn Planter, All large melon growers are now using the Segment Corn Planter.



The Expan Planting Pot

Made of heavy tar paper. Open top and bottom. For propagating plants, trees and shrubs—no waste space—no breakage. For the nurseryman, florist and market gardener. You can grow melons, squash, canteloupes, cucumbers, etc., three weeks earlier in these pots than out in the open. When setting the plants in the field plant the pot and all, leaving about one inch above the top of the soil; this

protects the tender plant from cut worms, wire worms, moles and field mice.

THE EXPAN PLANTING POT All prices f.o.b. Los Angeles

Size	Price per 1000	Price per 100	Wt. per 1000
3x8	\$11.00	\$1.75	85 lbs.
3x6	8.90	1.55	66 lbs.
3x5	7.25	1.50	55 lbs.
3x4	6.25	1.35	44 lbs.
3x3	4.75	1.25	33 lbs.
2x8	8.00	1.45	53 lbs.
2x6	6.25	1.35	44 lbs.
2x5	5.25	1.25	37 lbs.
2x4	4.60	1.00	29 lbs.
1½x5	3.75	.75	22 lbs.
1½x4	4.60	1.00	28 lbs.
1½x3	3.75	.75	22 lbs.
1½x2	2.95	.50	17 lbs.

Raffia

We have natural Raffia by the pound or by the ton. Great quantities of it is used on the Los Angeles market by gardeners for tying vegetables. We are headquarters. Price—(Per lb. 25c) For larger quantities write for price.

Spagnum Moss

Fine grade of Eastern moss for packing trees, plants, Asparagus roots, etc. (Single pound 20c) postpaid. (Per bale, \$2.75 f.o.b. Los Angeles.

Green Moss

Line your wire hanging baskets with this green moss. It will add to the attractiveness of the basket. Price—(per lb. 30c).

NURSERY AND FARM REQUISITES Nursery Supplies

Grafting Wax—(¼ lb. 25c) (½ lb. 40c) (1 lb. 75c) postpaid.
Balling Twine—(5-lb. ball \$1.75) f.o.b. here.
Budding Twine—(Per ball 80c) (Postpaid 60c).
Budding Cloth—(Per square yard 70c) prepaid.

Plain	100	1000	Painted	100	1000
4	25c	\$2.50	4	30c	\$3.10
5	30c	3.10	5	35c	3.60
6	35c	3.60	6	40c	4.10

Tree Labels

Copper Wired, painted	100	1000
Copper Wired, plain	.35	\$3.25
Ironed Wired, painted	.30	2.75
Ironed Wired, plain	.30	2.85
	.30	2.50

Bacon Hand Drill



An inexpensive and very accurate hill and drill seeder. The hill dropper deposits seed 9, 12, 18 and 36 inches apart. Will sow all kinds of garden seeds in a narrow line which allows close cultivation and saves hand labor. Is light and very durable.

Price \$15.00, f. o. b. Los Angeles.



Paraffine

Yucca Tree Protectors

The Yucca Tree Protector is made from the soft spongy Desert Palm, and will last years exposed to the weather. Wires go entirely around the protector, thus holding it in place, even should it crack a little while in use. Protect your trees against the hot rays of the sun, rabbits, gophers, and be sure to use this protector if bothered with Tree Borer.

Size	Lbs.	Per 100	Per 1000
14 in.	90	\$1.75	\$12.00
30 in.	200	2.50	21.00
18 in.	125	2.00	15.00
24 in.	150	2.25	18.00



Yucca

Paraffine Paper Tree Protectors

These Protectors are perforated, giving a free circulation of air around the tree trunk. The Paraffine preserves the paper, making the Protector very durable. Will not split or tear.

All prices f.o.b. Los Angeles

Size.	Lbs.	Per 1000	Price
14 in.	50	\$12.50	\$1.75
18 in.	65	15.00	2.00
24 in.	85	18.50	2.25
30 in.	106	22.00	2.50
36 in.	127	28.50	3.50

Pensylvania Fruit Picker



Pensylvania Fruit Picker

No ranch is completely equipped without this valuable tool. It is always the choicest fruit that cannot be reached from the ladder; you do not wish to knock it down with a club, as the fall would bruise it. Use the Fruit Picker and the fruit is caught in the pocket prepared for it. Every ranch that has half a dozen or more fruit or walnut trees should have one or more Pennsylvania Fruit Pickers. (Price 75c) (by Mail 85c).

Every thing that is offered in this book has been tried and is practical. If you need anything listed here do not hesitate to order it.

AMCO GARDEN HOSE

All hose looks alike to the average person, and the buyer is usually at the mercy of the seller. In buying hose from us you are dealing with an established firm, and we go further than that by putting our name on the hose we sell, which signifies that we are not afraid of the quality. Amco hose is made expressly for us. Quality and price are right.

½ inch, 25 foot lengths with ¾" couplings	\$3.25
½ inch, 50 foot lengths with ¾" couplings	6.50
¾ inch, 25 foot lengths with ¾" couplings	4.00
¾ inch, 50 foot lengths with ¾" couplings	8.00

Spray Hose

Heavy, high pressure hose for power pumps.

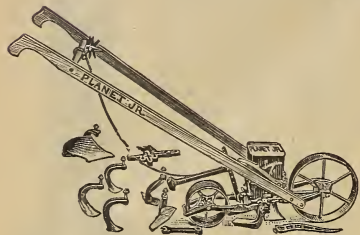
¾ inch	25c per foot
½ inch	30c per foot
Five-ply hose for use on small spray pumps.	
¾ inch	17c per foot
½ inch	21c per foot

PLANET, JR. GARDEN TOOLS

Planet Jr. Tools Will Make Gardening a Pleasure, Besides
Saving Time and the Back.

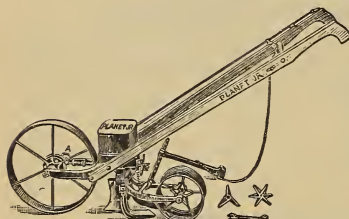
No. 4 Planet Jr.

Combined hill and drill seeder, single wheel hoe, cultivator and plow. This is the ideal machine for the family garden. May be changed from seeder to cultivator in a few minutes. Your boys and girls will enjoy gardening with this tool. Price \$18.75 f. o. b. Los Angeles.



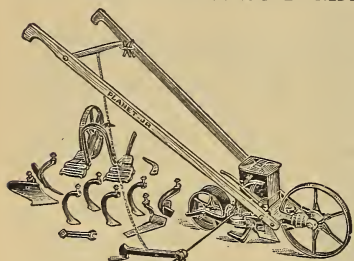
No. 4-D Planet Jr.

This is the same as No. 4 except that it does not have the cultivator parts. It may be used by gardeners who have sufficient seeding to warrant having a seeder only. Sows all garden seeds in hills or drills. Price \$15.25 f. o. b. Los Angeles.



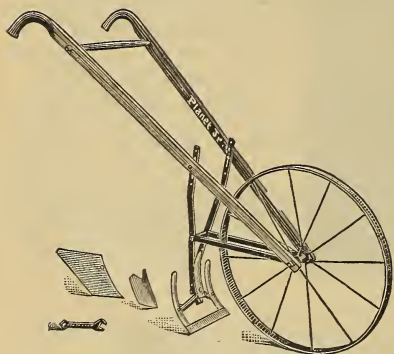
No. 25 Planet Jr.

Combined hill and drill seeder, double or single wheel hoe, cultivator and plow. This is a larger tool and is used by onion growers, lettuce growers and market gardeners. Also a good size for the large family garden. Price each \$23.00 f. o. b. Los Angeles.



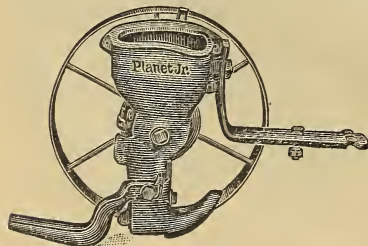
No. 119 Planet Jr.

A very popular high wheel cultivator, fully equipped as shown in picture. This is a durable all-purpose tool. The No. 35 seeder attachment may be used with tool, and makes an inexpensive combination. Price \$5.00 each f. o. b. Los Angeles.



No. 35 Seeder Attachment

May be attached to the No. 119 and other Planet Jr. cultivators. Suitable for the small family garden. Will sow all garden seeds in hills or drills. Quickly and easily attached. Price \$6.00 f. o. b. Los Angeles.

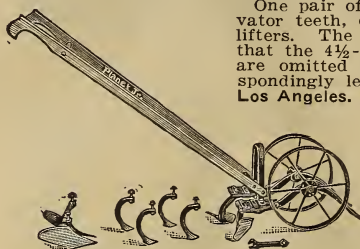


No. 11 Double and Single Wheel Hoe

One pair 6-inch hoes, one pair 4½-inch hoes, four cultivator teeth, one pair plows, two 3-tooth rakes, two 5-tooth rakes, two leaf-lifters. The steel frame can be set at different heights to suit. This is one of the most complete implements we have. Each \$14.75 f. o. b. Los Angeles.

No. 12 Double and Single Wheel Hoe

One pair of 6-inch hoes, four cultivator teeth, one pair plows, two leaf lifters. The same as No. 11 except that the 4½-inch hoes and the rakes are omitted and the price is correspondingly less. Each \$12.00 f. o. b. Los Angeles.



No. 16 Single Wheel Hoe

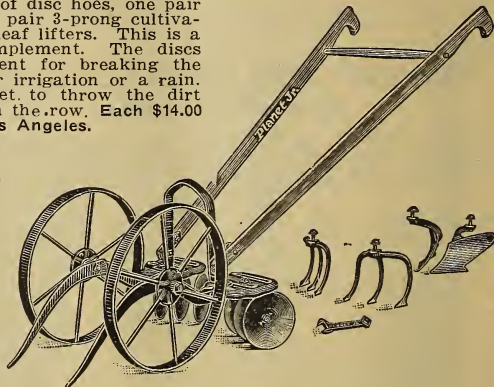
One pair 6-inch hoes, three cultivator teeth, one large garden plow, one 7-inch rake, one 4-inch rake, one leaf guard. May be used to good advantage in any garden work. Each \$9.75 f. o. b. Los Angeles.

No. 19 Garden Plow and Cultivator

Fifteen-inch wheel, one 2-inch cultivating tooth, one 10-inch sweep, one plow, one 5-prong cultivator. An inexpensive and effective tool for large or small garden. Each \$6.25 f. o. b. Los Angeles.

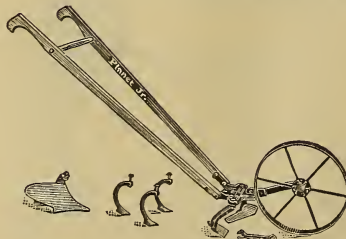
No. 14 Double and Single Wheel Disc Hoe

One set of disc hoes, one pair plows, one pair 3-prong cultivators, two leaf lifters. This is a popular implement. The discs are excellent for breaking the crust after irrigation or a rain. May be set to throw the dirt to or from the row. Each \$14.00 f. o. b. Los Angeles.



No. 17 Single Wheel Hoe

One pair of 6-inch hoes, three steel cultivator teeth, one large garden plow. Same as No. 16 except in equipment. Each \$8.00.

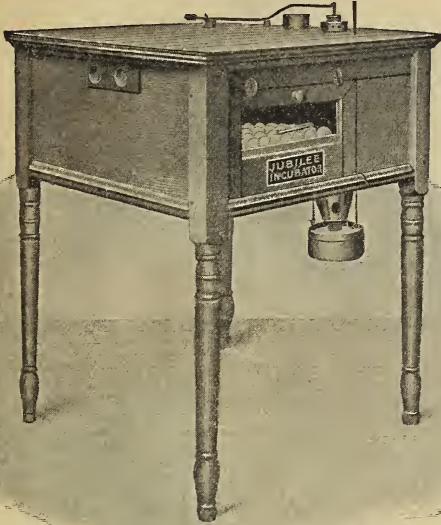


Planet Jr. tools are made to suit every purpose for the convenience of the gardener.

POULTRY SUPPLY DEPARTMENT

JUBILEE INCUBATORS and BROODERS

All Prices F. O. B. Los Angeles



Jubilee Incubator

We wish to call your attention to only a few of the main reasons why the Jubilee Incubator is such a success.

First. The material used is clear dry California Redwood, built by efficient workmen.

Second. The egg chamber is lined with heavy wool felt covered with a non-absorbent paper.

Third. The regulator is simple, sensitive and durable.

Fourth. The ventilation is correct in theory, and more important, is correct in practical operations.

Fifth. Moisture with the Jubilee system can be added or decreased without opening the door of the machine.

Sixth. The egg trays are framed from angle steel, galvanized, are easily washed and kept sanitary.

For further information ask for Jubilee leaflet.

Made in the following sizes:

Capacity	Weight	Dimensions	Price
108-egg	110 lbs.	2 ft. 8 in. x 3 ft.	\$37.00
216-egg	150 lbs.	3 ft. 8 in. x 3 ft. 3 in.	48.00
324-egg	200 lbs.	3 ft. 8 in. x 5 ft. 3 in.	60.00
560-egg	260 lbs.	3 ft. 2 in. x 7 ft. 2 in.	78.00

F. O. B. Los Angeles

What the Manufacturer Says

The Jubilee Incubator has reached a stage where it has become a necessity to the chicken man. Why? Because its principle is right; because it will hatch more, better and stronger chicks than any other make of incubator. All this is due to the fact that we know what is necessary to hatch chickens. Our long experience in the manufacture of incubators and brooders has made this possible. We did not look at some other make of machine and make a copy of it, leaving out the most important details, but built our incubator on actual experiment in incubation, through many years of experiment until now we have a perfect product.

NURSERY

At one end of the egg trays there is a space left open at the time of hatching, so that the newly hatched chicks, which will come to the front, due to the fact of light going in through the doors which attract them, where they will immediately drop down through this opening into the nursery chamber, which is a few degrees cooler than the egg trays. Here they will be undisturbed by hatching chicks, and will sit quietly because of this section being closed and no light entering, where they will huff up until it is time to remove them.

We are submitting you prices of our machines and would appreciate correspondence in case we have not covered some particular point that you are in doubt about.

The greatest factor in the success of the poultry business is the incubator. If this is not the best that can be procured, and if you do not get your full quota of chicks from the eggs put in, your profit is gone, and, therefore your business will not be a success.

The Hen in the City

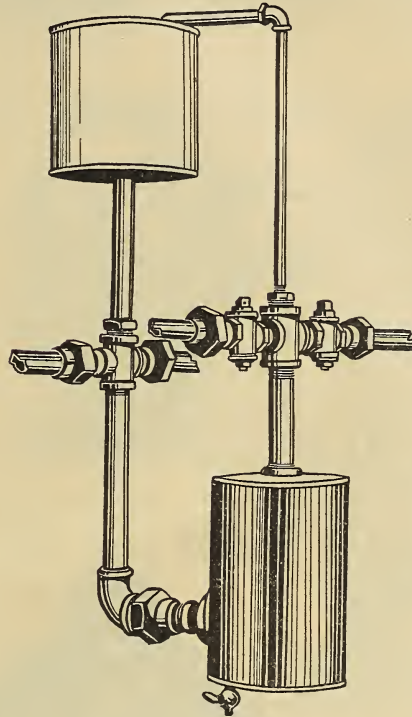
A space 10 feet wide across the back yard or by the garage is large enough to keep a small flock of hens sufficient to supply all the eggs you will need and an occasional pot pie, and do away with the odious garbage can that is more unpleasant and more bother than a flock of hens.

HOW TO CARE FOR A FEW HENS

A small open house protected from the wind and dusted occasionally with slacked lime or Nico-dust. Keep tacked to a post a hopper containing a mixture of shell, grit and charcoal. Another hopper for grain, another for dry mash. The hoppers avoid waste. Feed the hens all the refuse from the kitchen and all the green refuse from the lawn and garden. See that they have a place for dusting.

A little such preparatory care will make subsequent labor and expense insignificant.

THE LOS ANGELES BROODER HEATER



Many manufacturers have attempted to meet the demand for a successful brooder and brooder house heating system. We are meeting this demand when we offer this heater.

The heater is made of heavy rolled copper, including 16 half-inch brass tubes, giving very large heating surface, and is almost indestructible under ordinary conditions. The heat comes from gas burners furnished with the heaters. Gasoline can also be used.

The regular size is \$23.00.

Oblong Boiler is \$29.00.

Including two burners.

IMPROVED RELIABLE BROODER

SEE PAGE 90

We buy Reliable Brooders by the carload. They are in use by the thousands throughout the big poultry sections of California, and every user is a booster for the Reliable. The heater is positively "fool proof." Has no valves to clog up and cause trouble. The burner is operated on an oil level and is adjusted to the maximum flame at the factory so that it is impossible to overflow it. The flame can be adjusted to any height desired by a simple lever device which is easy to understand and operate. All heaters are shipped out fully assembled and tested for leaks. All that is necessary is to fill the oil reservoir and touch a match to the lighting ring and you are ready for action. The cost of operating the Reliable is very low and you can fill the brooder to capacity or you can brood as few as you like, with equal success.

The Reliable is automatically ventilated without any trouble to the operator, and the chicks which are placed in its care are assured of steady, healthy growth.

It is endorsed by many agricultural experiment stations, including the College of Agriculture at Berkeley, and hundreds of our own customers. If you are in doubt at all about the Reliable being the best brooder for you to buy, write to us, and let us explain more fully the merits of this wonderful brooder which is the result of forty-one years experience in artificial hatching and brooding by the manufacturer.

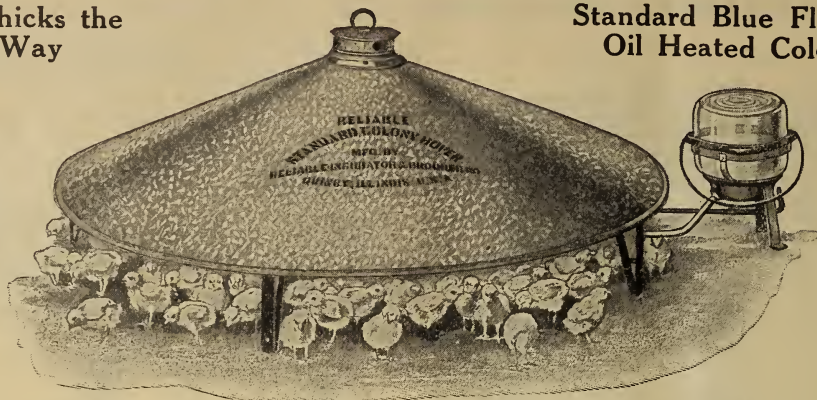
No.	Capacity	Shipping Weight	Price
1	500 Chicks	38 lbs.	21.00
2	1000 Chicks	45 lbs.	25.00

THE NEW IMPROVED RELIABLE BROODER

Raise Your Chicks the
Scientific Way

Standard Blue Flame, Wickless,
Oil Heated Colony Brooder

Price
No. 1. 500 Chick
Size.
\$21.00 f. o. b. Los
Angeles



Price
No. 2. 1000 Chick
Size.
\$25.00 f. o. b. Los
Angeles

Brooder in Operation

There is nothing to wear out or break in this brooder. You can fill the hover to full capacity or you can brood as few as you like, with equal success, and with less work and trouble. The heater does not take up any space under canopy as is the case with the coal stove.

Each Heater is equipped with a one-gallon self-feeding Glass Oil Container, so that you need have no fear of the light going out as the Oil Supply will run it for 24 to 36 hours.

They burn with a clear, blue flame with no fumes or odors. Are easy to care for as there are no ashes to remove, no gas or smoke, no coal to handle no noise to disturb or scare the chicks. Gives all the heat necessary under canopy regardless of outside weather changes and at the least cost.

CANOPY—The canopy is made of the best grade Galvanized Steel. It is double seamed and reinforced at the bottom with a ¼-inch iron rod folded in place and has a cast iron collar at the top which makes canopy very strong and durable. The legs are made of heavy steel, folded to give strength and rigid support to canopy. It is shipped all assembled with legs detached to take the lower freight rate.

This Brooder will save you time, money and trouble, and your chickens will grow faster, get heavier and will thrive, because this Brooder will take the very best care of them and keep them comfortable and healthy. This without question is the most popular and most efficient Brooder on the market.

Note improvements:

Indicator dial in front under oil fount—quick, easy adjustment to any size flame desired.

Flexible tube connecting burner to feed pipe, with positive connections—no sleeve connection or packing box or nuts to leak and give trouble.

HEATER—After several years of experimenting, a heater has been perfected that is "Fool-Proof." Has not valves to clog up and give trouble. It operates on an Oil Level—cannot overflow. Is absolutely safe. All parts being easily and quickly cleaned. The big advantage in this new heater is that there is no packing or stuffing box arrangement to get loose and leak oil, with its danger. The lighting device for raising and lowering Burner is simple and positive—no lost motion or sticking—free, easy movement, and will hold Burner where set without danger of slipping or being moved by the chicks. These heaters are equipped with an INDICATOR DIAL, with positions plainly marked for a LOW, MEDIUM OR HIGH FLAME—making the adjustment of the flame both easy and accurate.

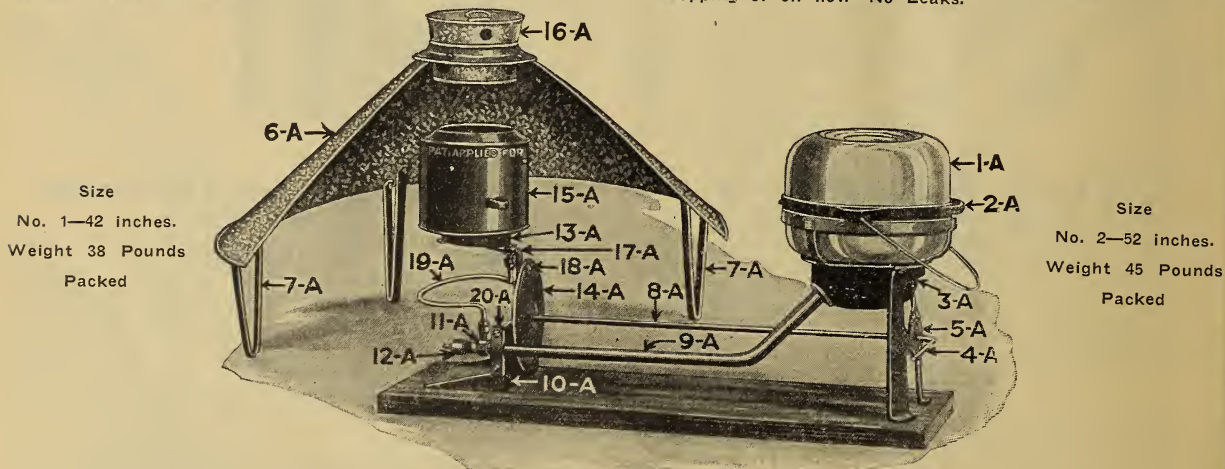
This Heater will not flare up or go out during the night hours and scare or chill your chicks. It burns Automatically without care or bother, only to keep the Reservoir supplied with oil. This means success for owners of the RELIABLE IMPROVED STANDARD OIL BROODERS.

SOME OF THE PRINCIPAL FEATURES

Burns Coal Oil or Kerosene
Absolute Flame Control
Quick, Easy Adjustment
Simple in Construction
No Valves or Packing Nuts
Works on an Oil Level
Economy of Operation

No Flue—Portable
Steady Blue Flame
No Wicks to Trim
No Oil Fumes, Smoke or Gas
Comfortable, Easy to Operate
No Overflowing of Burner
Convenient and Safe

Indicator dial for adjusting flame—No cold corners—No clogging or stopping of oil flow—No Leaks.



Cutaway Showing the Different Parts

No. 1-A—Glass Oil Reservoir
No. 2-A—Metal Lift with
Bale
No. 3-A—Oil Fount
No. 4-A—Handle on Adjust-
ing Rod
No. 5-A—Indicator on Stand
supporting Oil
Fount and Adjust-
ing Rod

No. 6-A—Galvanized Canopy
No. 7-A—Legs Supporting
Canopy
No. 8-A—Adjusting Rod
No. 9-A—Oil Feed Pipe
No. 10-A—Floor casting Sup-
porting Burner and
Lifting Device

No. 11-A—Connection to Feed
Pipe
No. 12-A—Cap for Cleaning
Feed Pipe
No. 13-A—Burner
No. 14-A—Lifting Device.
No. 15-A—Generator and
Chimney

No. 16-A—Ventilator.
No. 17-A—Burner Support
No. 18-A—Roller Bearing with
Washer and Key
No. 19-A—Flexible Tube Con-
necting Burner to
Feed Pipe
No. 20-A—Strap to Hold Feed
Pipe

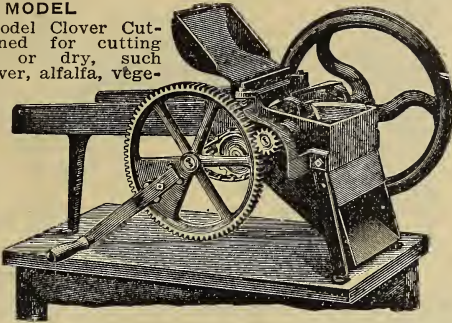
CLOVER CUTTERS

NEW MODEL

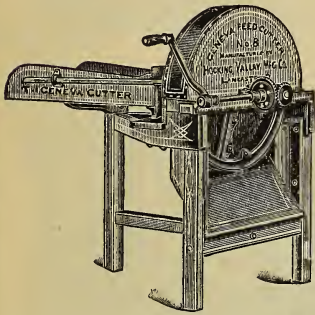
The new Model Clover Cutter is designed for cutting either green or dry, such growths as clover, alfalfa, vegetable tops, etc., into eighth-inch lengths.

Made only in one size. Knives can be adjusted and easily sharpened.

Price \$21.00 f. o. b. here.



GENEVA CLOVER CUTTERS



This machine is designed for large poultry raisers and is the most satisfactory machine on the market. The knives are fastened to the fly-wheel and will cut from $\frac{1}{4}$ to $\frac{1}{2}$ inches. May be used as a hand or power machine. For a power machine remove crank case parts and replace with pulley. Light running. Built to last a lifetime. The cutting parts are covered by a hood to protect the operator. Built in three sizes:

No. 6—Wt. 200 lbs.—Price \$48.00.

No. 8—Wt. 240 lbs. Price \$52.00.

No. 10—Wt. 280 lbs.—Price \$70.00.

No. 10 is equipped with pulley wheel and hand attachment.

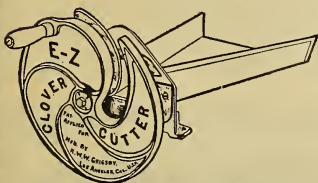
Pulley for No. 6 and No. 8, \$3.00.

Knives for No. 6 and No. 8, \$2.00 each.

F. O. B. Los Angeles

E. Z. CLOVER CUTTER

A SMALL CUTTER FOR A SMALL FLOCK



E Z Clover Cutter

Will cut green or dry alfalfa, straw, fodder, corn and vegetable tops. The heavy hand wheel acts as a balance wheel and makes the machine of easy operation. The knife and cutter bar are made of crucible steel and are easily adjusted. Packed one in a carton and may be sent by parcel post. Weight 15 lbs. Price \$8.50 f. o. b. Los Angeles.

BONE CUTTERS

MAN'S NO. 7

The New No. 7 is mounted on a strong iron stand and has patent automatic governing spring feed. Large, open-hinged cylinder, giving instant access to all working parts; has six knives, gear guard, anti-clog device, heavy balance wheel and other improvements. (See cut).

Price List of Mann's Bone Cutters f. o. b. here.

No. 7 (B. W. and iron stand) Price \$23.00, wt. 107.

No. 7 $\frac{1}{2}$ (hand or power) Price \$30.00, wt. 150.



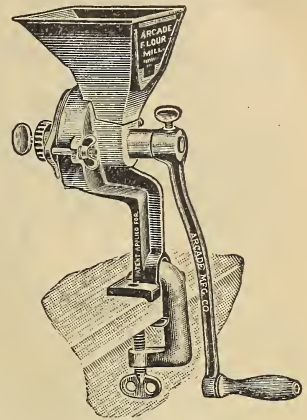
Model No. 7—Price \$23.00

GRINDING MILLS

The Arcade Flour Mill is called the "Home Mill." It is adapted for grinding whole grains into flour. There is not another machine on the market that compares with this mill for the housewife. It is made of best hardened steel, beautiful finish and needs no repairs except the burrs, which may be replaced at a very low price.

Weight of machine, 10 lbs. Price \$4.50 f. o. b. Los Angeles. Extra Set Burrs 75c.

Grow your corn and grind your corn meal.



Arcade Flour Mill

Stover

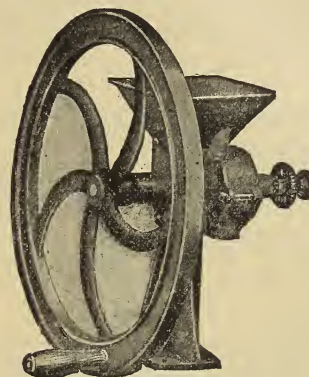
This machine grinds oats, peas, dry bone, shells, etc., for feeding to poultry.

No. 32—16-inch fly wheel. Capacity 2 bu. per hour. Weight 40 lbs. Price \$6.25 f. o. b. here.

No. 33—18-inch fly wheel. Weight 45 lbs. Price \$7.50 f. o. b. here.

No. 35A—Equipped with pulley only for operation by $\frac{1}{2}$ to 2 horse power. Weight 50 lbs. Price \$10.00 f. o. b. here.

No. 35B—Fitted with combination fly wheel and pulley. For hand or power. Weight 60 lbs. Price \$11.00 f. o. b. here.



Stover
No. 32

Black Hawk Feed Mill

The grist mill without a fault. Light running, well built. It will last a lifetime. Grinds all kinds of grain, fine or coarse. Price \$4.25 f. o. b. here.



Black Hawk Feed Mill

Black Hawk Corn Sheller

Shells easily and rapidly separates the cob from the corn. We give it special recommendation to poultry men. Price \$4.00 f. o. b. here. Weight 20 lbs. packed.



Corn Sheller

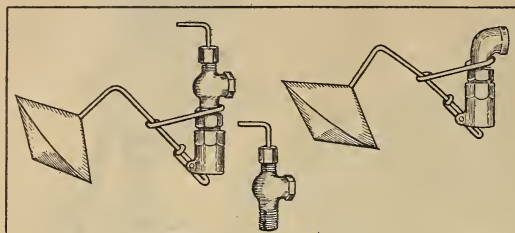
Healthy Hens Lay Eggs

To keep the hens healthy, feed them lettuce, kale, chard and sugar beets. Have some growing all the year round.

In our new store at 752 South Spring St., and at 755 South Main St. we have a more complete line of poultry supplies than ever before. You cannot fail to get what you want. Call and see.

"THE WATER BOY"

Automatic Fountains for Poultry and Pet Stock



No. 1

No. 2

No. 3

"The Water Boy" never forgets to fill the water jar, but furnishes just enough and no more.

It makes no difference to "The Water Boy" how large the dish or how small the pan, if so much water is required, it gives that much and no more.

For the baby chicks, the flock of hens, ducks, pigeon baths, fish ponds, horse troughs or any vessel where a constant supply of water is needed without an attendant.

Number 1 is called "The Water Boy" Combination, as the upper part is a shut-off and pressure regulator combined with the "Water-Boy" automatic float valve. The advantages of this combination are to regulate any pressure and flow, act as individual shut-off in case automatic becomes clogged, thus avoiding disturbance of the rest of the water line, and the fowls need not be without water if the one needs repair. Price \$1.50 postpaid.

Number 2 is a shut-off threaded at both ends to allow for attachment to water pipe at one end and an automatic at the other, or may be used by itself as faucet or drip. Price 50c. postpaid.

Number 3 is "The Waterboy Automatic Valve," with St. Ell. Attached like a faucet to 1/4-inch pipe, fills any dish and shuts off automatically. No special dishes to buy. No leathers, springs or adjustments to monkey with. Price \$1.25 postpaid. "The Water Boy" automatic fountain fills the dish and shuts off the water automatically.



A & M GALVANIZED FOUNTS

Made of heavily galvanized iron. Best of workmanship. Very sanitary and easily cleaned. Chicks cannot get into them or upset them.

1 qt. size, wt. 1 1/2 lbs. 40c each
2 qt. size, wt. 1 3/4 lbs. 50c each
4 qt. size, wt. 2 lbs. 75c each
6 qt. size, wt. 2 1/2 lbs. 85c each

F. O. B. Los Angeles

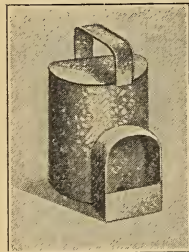
SANITARY STONE FOUNTS



1 qt. 30c. Wt. 4 lbs.
2 qt. 45c. Wt. 6 lbs.
1 gal. 55c. Wt. 7 1/2 lbs.
6 qt. 90c. Wt. 9 1/2 lbs.

If ordering by mail or express add 25c for packing charges for one or more founts.

F. O. B. Los Angeles



FLAT BACK WALL CHICKEN FOUNT

This fount can be used very conveniently for Pigeons, Chickens, Ducks and other poultry. Well made of heavy galvanized iron. To hang on the wall at any convenient height from the ground.

1 qt. size, weight 1/2 lb. 50c each
2 qt. size, weight 1 lb. 90c each
1 gal. size, weight 1 1/2 lbs. \$1.20 each
6 qt. size, weight 3 lbs. \$1.50 each

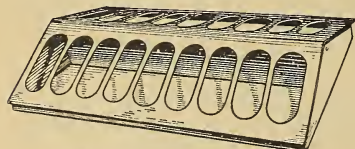
F. O. B. Los Angeles

A & M Chick Feeders

Any of the following articles ordered by Parcel Post add 10c extra for packing and postage.

DOUBLE FEEDERS

12 in. 50c, wt. 1 lb.
18 in. 60c, wt. 1 1/2 lb.
24 in. 70c, wt. 2 lbs.
30 in. 95c, wt. 2 1/2 lb.



A & M Double Chick Feeder

Poultry and Rabbit Founts and Feeders

Cannot be sent by mail. These are made especially strong and durable for rabbits. The wide bottom prevents them turning over. Not easily broken.



Rabbit Drinking Founts

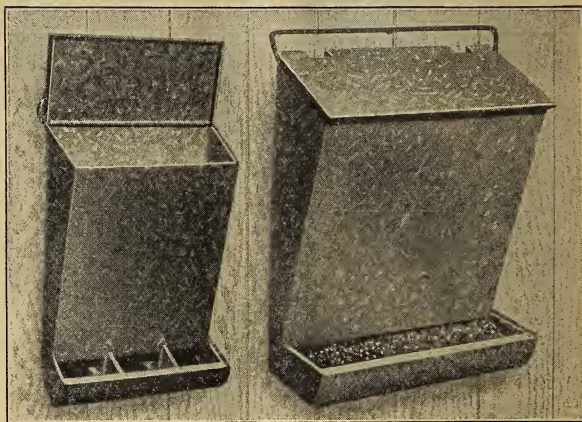
1 pt. 15c each (per dozen \$1.50). Weight 1 lb. each.
1 qt. 20c (per dozen \$2.00). Weight, 2 lbs. each.
1/2 gal. 30c each (per dozen \$3.00). Weight 4 lbs. each.
1 gal. 40c each (per dozen \$4.00). Weight 4 1/2 lbs. each.
6 qt. 60c each (per dozen \$6.00).
8 qt. 70c each (per dozen \$7.20). F. O. B. Los Angeles.



Rabbit Feeders

Rabbit Feeders. These are made of stoneware and glazed with a flanged edge for feeding rolled barley. The flanged edge prevents rabbit from throwing out the grain and wasting it. Comes in white, glazed.

No. 1, 20c each (1 dozen \$2.00). Weight 1 lb. (each).
No. 2, 25c each (1 dozen \$2.50). Weight 2 lbs. (each).
No. 3, 30c each (1 dozen \$3.00). Weight 2 1/2 lbs. (each).
No. 4, 40c each (1 dozen \$4.00). Weight 4 lbs. (each).
If ordered by express add 25c to order for packing.



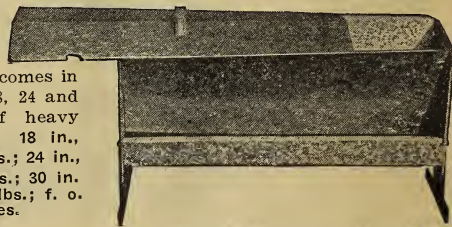
Round Bottom Dry Mash Hopper

Heavy galvanized steel 12 inches wide. Just the feeder for small flocks. Wt. 4 lbs. Price \$1.25 f. o. b. here.

Combination Feeder

Two compartments for grit and mash. Width 8 inches. Weight 3 1/2 lbs. Price, \$1.00.

GREAT WESTERN DRY MASH FEEDER



Great Western Dry Mash Feeder

This feeder comes in three sizes: 18, 24 and 30. Made of heavy iron. Price: 18 in., \$2.00, wt. 7 lbs.; 24 in., \$2.50, wt. 9 lbs.; 30 in., \$2.75, wt. 10 lbs.; f. o. b. Los Angeles.



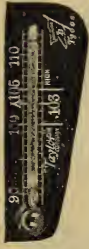
A & M Single Chick Feeder

SINGLE FEEDERS

12 in. 30c, wt. 1 lb.
18 in. 40c, wt. 2 1/2 lb.
24 in. 50c, wt. 2 lb.
30 in. 75c, wt. 2 1/2 lb.

F.O.B. Los Angeles

INCUBATOR AND BROODER THERMOMETERS



No. 5774.



No. 5770

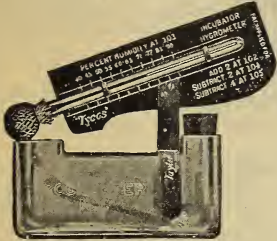


No. 5780

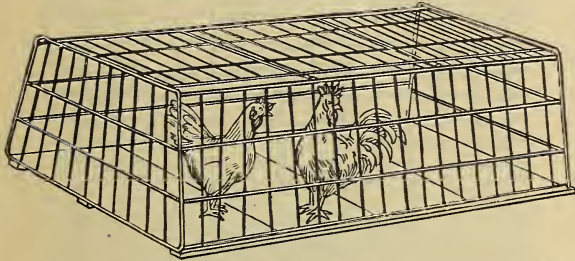
Many persons using Incubators and Brooders fail to understand the importance of having a thoroughly tested and reliable thermometer. Many a fine hatch is lost, and many a fine brood of chicks killed by using a poor thermometer. Use great care in purchasing a perfect thermometer. Our thermometers are thoroughly tested and accurate.

HYGROMETERS

The moisture requirement during the hatching period is important. First week—65%, second week 60%, third week 55% moisture should be present. A Tycos Hygrometer will assist in this regulation. Price each \$1.75, postage and packing 10c extra.



WIRE SHIPPING COOP



This Coop is made of galvanized steel wire and bars which are electrically welded. It is strictly sanitary, will not rust, has bottom made of seasoned hardwood with cleats on top and on under sides. Bottom can be quickly and securely attached and can be quickly detached for shipping empty. It is built on taper, allowing crates to be telescoped when shipping empty. This coop is very light, weighing only 24 lbs. Is very strong; will last for years. Positively the most durable, economical and satisfactory shipping coop made. Standard size, 27x41x13 in. high, weighs 24 lbs. Price \$5.00 each. Turkey size, 27x41x20 in. high, weighs 27 lbs. Price \$6.00 each. Extra bottoms for coop.....Price 1.50 each. F. O. B. Los Angeles

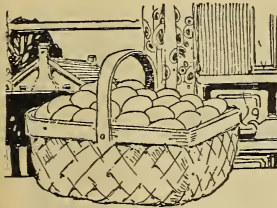
Keep-Egg

The Successful Egg Preservative
Keeps eggs in perfect condition from one season to another. Apply to every portion of the egg's surface. Wrap in paper and put in a cool, airy place.

Keep-Egg is put up in porcelain cups.

Cup sufficient for 25 dozen eggs, 50c, by mail 60c.

Cup sufficient for 50 dozen eggs, 75c, by mail 85c.



It is profitable to preserve some eggs when they are plentiful in order that you need not buy when they are scarce and the price is high.

Read these pages, you will find in them something you long have needed. It is good economy and commendable thrift to buy what you need.

PARCEL POST AND SHIPPING BOXES

These boxes are made of heavy corrugated paper, three thicknesses, and are especially adapted for parcel post shipping:

1 dozen size.....15c each	30 egg size.....35c each
2 dozen size.....25c each	50 egg size.....70c each
15 egg size.....25c each	

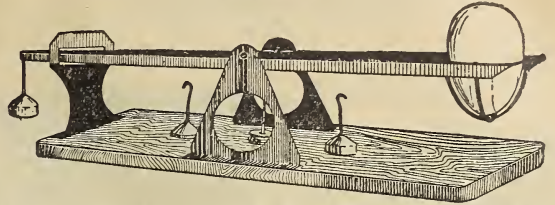
Postage Extra

BABY CHICK SHIPPING BOXES

25 Chick size.....\$.30 each
50 Chick size......40 each
100 Chick size......60 each

Postage extra

GILT EDGE EGG SCALE



Is the only Egg Scale that will give the correct grading within a range of 17 to 30 ounces to the dozen. Standards of eggs as follows: No. 1 Pullet, 20 to 22 oz.; No. 2 Pullet, 19 to 20 oz. Price \$2.00; postpaid, \$2.10.

LINCOLN EGG GRADER

Note—the correct position of placing egg on grader



A simple and accurate scale. Place large end of egg in hole at right angles to bar. If grader remains stationary, egg is less than 18 ounces per dozen or fewer. If grader sets on 4 points, egg is between 18 and 22 ounces per dozen, or pullet. If grader is tilted on hole end egg is 22 ounces or more per dozen or standard. Price 60c postpaid.

SEARCHLIGHT EGG TESTER



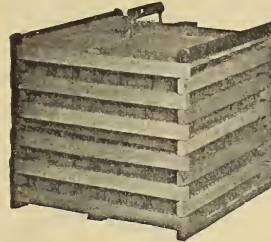
Infertile eggs in an incubator mean a loss of time and money. The testing of eggs is a very important part of incubation and a little expense at the beginning will pay well in the end. The Searchlight will do the job quickly and do it well. It should be a part of your equipment, whether you are operating one incubator or a dozen. Postpaid \$5.10.

A & M Egg Testers

No. 2—Tin with opening on side 40c postpaid.

No. 3—Tin made to fit any lamp, 50c postpaid.

HUMPTY-DUMPTY EGG CARRIER



One of the handiest egg carriers on the market. This carrier will hold twelve (12) dozen eggs. Can be folded flat for shipment and is made of strong but light wooden slats fastened with strong steel wires. Very handy and something every poultryman should have. Price, 95c each, f. o. b. Los Angeles. Weight 6 lbs.

Egg Boxes

A strong, neatly made box, partitions full, thus thoroughly protecting the eggs. Will pack well in large egg cases. Very convenient for marketing eggs by the dozen.

2 x 6—(12, 30c)
(100, \$2.00) postpaid.



POULTRY INSTRUMENTS CAPONIZING SET

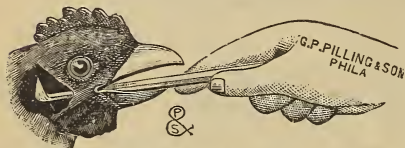
This set is one of the latest design. It is a combination of tools that can be used with one hand and seldom causes the operator to slip and cause the loss of the bird.

We carry the following sets:
 Pillings Cornell\$5.50
 Pillings Farmer 4.00
 Pillings Special 5.00

We suggest that you use either the Cornell or Farmer. They are packed in a fine oak case. Each set contains full instructions.



PILLING ANGULAR KILLING KNIFE



Showing the Angular Killing Knife

By simply turning the wrist the jugular vein and spinal cord are cut, thereby bleeding the fowl, allowing the feathers to be removed without using water. 85c postpaid.

PILLING FRENCH POULTRY KILLING KNIFE

Every poultry raiser should have one of our Killing Knives. They are made of a finely tempered instrument steel with nickeled handle; will last a lifetime. Don't wait. Send for one now. Sent securely packed by mail on receipt of price. 85c postpaid.

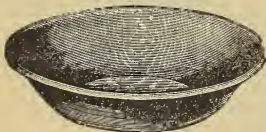


PETTEY'S POULTRY PUNCH



One of the most convenient punches made. It is small and easy to operate, cutting a clean hole every time. Price 25c; postpaid 30c.

PIGEON NESTS



Fills a long-felt want for all squab breeders. Wood gets filthy and vermin-laden in a very short time. Iron or earthen-ware is cold and bad for birds.

Indurated Fibre is lighter than wood, will not warp or break, has a brown finish (not polished), which makes it easy to clean. Impervious to vermin or moisture and is a

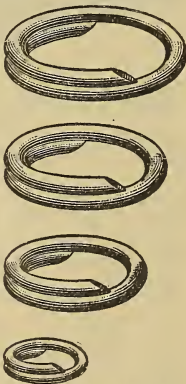
non-conductor of either heat or cold. A money-saver, and will increase the hatch. Sanitary, handsome, practically indestructible and cheap. Has hole in bottom for screw to hold nest firm and steady. Each 35c. Dozen \$3.75.

LEG BANDS FOR POULTRY

Spir-ol Leg Bands are made in six colors and all sizes, and are put on and taken off like a key ring. Can't drop off. Colors are black, white, red, yellow, blue, green, purple, light blue, maroon and pink. In ordering please state color wanted, also name of breed. Leghorn, Rocks, Rhode Island Reds or Turkeys. It enables us to fill the order satisfactorily. Prices:

12 Bands for.....\$.15 postpaid
 25 Bands for......25 postpaid
 50 Bands for......50 postpaid
 100 Bands for......75 postpaid
 500 Bands for..... 3.60 postpaid
 1000 Bands for..... 7.00 postpaid

Spir-ol Band for Chick, Bantam and Pigeon size as follows: 12 for 15c; 25 for 25c; 50 for 40c; 100 for 65c; 500 for \$3.00; 1000 for \$5.25. These bands come in the same colors as given above for Poultry Bands.



Spir-ol Leg Bands

SMITH SEALED BANDS

Smith Sealed Bands were put on the market for a purpose. That purpose was to prevent dishonesty in the handling of scored birds and to protect the purchaser of same. Price— (12 for 25c) (25 for 50c) (50 for 85c) (100 for \$1.50) postpaid. **FLAT ALUMINUM LEG BANDS** These bands fit any variety fowls. Price—(12 for 15c) (25 for 30c) (50 for 50c) (100 for 75c) postpaid. **ECLIPSE DOUBLE NUMBER COLORED—**



For Chickens

Large double numbers on colored background. In 12 colors, 3 sizes. State breed and set. (12 for 40c) (100 for \$2.75) postpaid.

CHICK-OPEN-ALUMINUM BANDS

Narrow strip aluminum with numbers on. Easily put around leg.

Prices: (12 for 15c) (100 for 90c) postpaid. **PIGEON DOUBLE NUMBER BANDS**



Numbers Easily Seen
 12 Colors, state variety

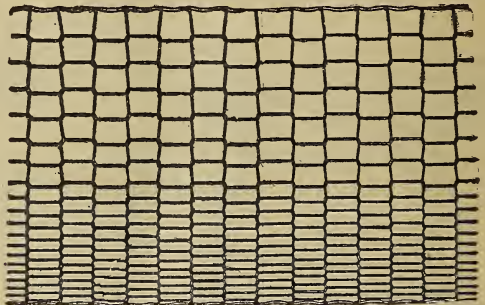
Prices: (6 Pairs 25c) (50 Pairs \$1.75) postpaid.

BUHACH POWDER

For dusting setting hens and baby chicks. No danger in using it. Pkgs. 25c.

Warner Junior Poultry Fencing

Warner Junior Poultry Fence is made of No. 18 galvanized wire with No. 14 wire top and bottom, stay wires placed 4½ inches apart. At the bottom of the fence mesh is 1½ inch and gradually widens as the top is reached.



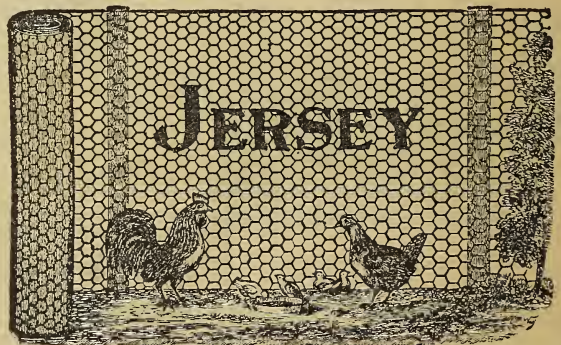
Put up in 10 rod rolls.

Weight	f.o.b. here
Price	
3 ft. wide, 33 lbs., per roll.....	\$5.90
4 ft. wide, 36 lbs., per roll.....	6.60
5 ft. wide, 40 lbs., per roll.....	7.60
6 ft. wide, 48 lbs., per roll.....	8.50

Subject to market fluctuations

Jersey Poultry Fencing

This wire is made of the full 20 gauge hand drawn steel wire galvanized after weaving. Each roll contains 150 running feet.



We carry the following sizes:

	Wt. Price		Wt. Price
1 1/2 ft. 2 in. mesh, 10..	\$ 2.05	1 ft. 1 in. mesh, 16..	\$ 4.70
2 ft. 2 in. mesh, 16..	2.95	1 1/2 ft. 1 in. mesh, 24..	6.75
2 ft. 2 in. mesh, 22..	3.70	2 ft. 1 in. mesh, 32..	8.45
3 ft. 2 in. mesh, 28..	5.00	3 ft. 1 in. mesh, 48..	11.65
4 ft. 2 in. mesh, 34..	6.70	4 ft. 1 in. mesh, 64..	15.50
5 ft. 2 in. mesh, 40..	8.40	5 ft. 1 in. mesh, 80..	19.50
6 ft. 2 in. mesh, 46..	10.15	6 ft. 1 in. mesh, 96..	23.40

MISCELLANEOUS

Write for Quantity Price

Bird Seed, mixed	Per lb. 15c.
Canary, plain	Per lb. 15c.
A & M Roller Mixture	Per lb. 20c.
Hemp	Per lb. 15c.
Rape, common	Per lb. 15c.
Sunflower	Per lb. 15c.
Flax seed	Per lb. 15c.
Tobacco stems	Per lb. 15c.

(By Mail 10c. extra)

CONDIMENTS

Mustard, ground	Per lb. 35c.
Ginger, ground	Per lb. 35c.
Pepper, Chili ground	Per lb. 20c.
Pepper seed for poultry	Per lb. 20c.
Salt, Leslie's Loop	Per brick 25c.
Salt Leslie's Brick, plain (8 lbs.)	Per brick 25c.
Petlick—Salt Spools	Carton of 10 spools, 90c, by mail \$1.00
Packing and Postage 10c extra.	

PACKAGE GOODS

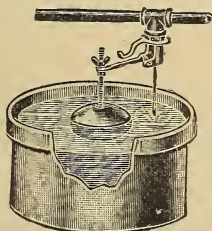
Charcoal (2 lbs.)	15c pkg.
Hydrated Lime (4 lbs.)	25c pkg.
(By Mail 10c. extra)	

LITERATURE FOR POULTRYMEN

	Price	Pstpd.
American Standard of Perfection	\$2.50	\$2.70
Artificial Incubation and Brooding	1.00	1.15
Barred White, Buff, Plymouth Rocks	1.00	1.15
Bantam Fowl	.50	.60
Broilers and Squabs	.60	.70
California Poultry Practice, by Mrs. Susan Swaysgood	1.00	1.20
Call of the Hen, by Walter Hogan	2.00	2.25
Canary Keeping for Amateurs	.85	.90
Chick Book	.50	.60
Diseases of Poultry	1.00	1.25
Duck Culture, by James Rankin	.90	.95
Ducks and Geese	.75	.85
Eggs and Egg Farm, by Stoddard	.65	.70
Hog Book by W. S. Guilford	2.00	2.25
Leghorns, Brown, White and Buff	1.00	1.15
Milk Goat Dairy, by G. H. Wickersham	.50	.60
National Standard Squab Book	1.00	1.15
Pigeon, The, 9th edition, by Meersch	.25	.35
Profitable Culling and Selective Flock Breeding, compiled by Jackson & Curtis	1.50	1.70
Poultry Houses and Fixtures	1.00	1.15
Poultry Architect, by Fiske	.75	.85
Poultry Account Book	.40	.50
Poultry Culture	1.50	1.70
Practical Poultry Keeping, by Wright	2.00	2.20
500 Questions and Answers, by J. W. Darrow	.25	.30
Rabbits, Fur Bearing, by Ritchey	.50	.60
Rabbit Pedigree Blanks, per dozen	.25	.35
Rabbit, The Western Book, by Ritchey	.60	.70
Rabbit 9th edition	.25	.35
Rabbit Culture and Standard, by Deardoff	.60	.70
Rhode Island Reds	1.00	1.10
Successful Poultry Keeping	1.00	1.05
The New Egg Farm, by H. H. Stoddard	1.50	1.70
Turkeys, All Varieties	.75	.85
Turkeys, How to Grow Them, by Herbert Myrick	1.50	1.60
Two Hundred Eggs a Year per Hen	.50	.60
Use of Artificial Light to Increase Winter Egg Production	1.50	1.70
Valuable Points on the Breeding of Pheasants, by Fred J. Sudow	1.00	1.15
Western Poultry Book	1.00	1.10
Wyandottes, The	1.00	1.10
The New Egg Farm, by H. H. Stoddard	1.50	1.70

THE "DANDY" AUTOMATIC FOUNT

Something poultry raisers have been seeking for years—an automatic fountain that will do the work and keep at it. We have in the "Dandy" a fount made of brass and nickel plated, with a ground valve which fits perfectly, thereby prevents clogging. Can be attached to any pipe same as faucet. Does not corrode or rust. Price 50c each, f. o. b. Los Angeles.



We are Sole Agents in the Southern Half of California for

DR. HESS' AND CLARK'S POULTRY FOODS AND REMEDIES



Prices quoted are f. o. b. Los Angeles. If wanted by mail add postage at zone rates. Liquids cannot be mailed.

We are the agents for this famous line of foods and remedies, and we cannot recommend them too highly. Every package is first-class, and will do all that is claimed for it. We want to call particular attention to Pan-a-cea, which is a tonic to help make hens lay. It should be fed all the year round in dry mash, and particularly at moulting time. A tablespoonful in soft feed once a day to every 20 or 25 hens keep the flock in excellent condition, and will without doubt increase the egg production.

Dr. Hess Instant Louse Killer is another article worthy of special mention. It may be used with good results for lice on poultry and stock, ticks on sheep, fleas on dogs, moths, bed-bugs and certain bugs infesting cucumber, squash, etc.

DR. HESS' POULTRY PANACEA Helps to Keep Poultry Healthy and to Make Hens Lay



The Dr. Hess' Poultry Panacea should be fed regularly the year round if you would obtain the best results from your flock. Car loads of this proven food tonic are sold in the large poultry districts of California. It is an excellent tonic for moulting time, is an egg producer, is an economical and highly satisfactory food. Send for Dr. Hess' Poultry Book and a free sample of Panacea. Prices: 1½ lb. pkg. 30c, 3 lb. pkg. 60c, 7 lb. pkg. \$1.25, 25 lb. pail \$3.50, 100 lb. drum \$12.00.

Dip and Disinfectant

Small	60c
Quarts	90c
2-quarts	\$1.50
1 gallon	\$2.25
5-gallon can	\$9.50

Fly Chaser

1-qt. size	75c
2-qt. size	\$1.25
1-gal. size	\$2.00

Instant Louse Killer

1 lb. pkgs.	30c
2½ lb. pkgs.	60c

Worm Powder

Package	50c
---------	-----

STOCK TONIC

Small size	35c
Large size	75c
25 lb. Pails	\$3.50

Roup Remedy

4 oz. cans.	25c
10 oz. cans.	50c
White Diarrhoea Remedy	25c

Healing Powder

4 oz. Can	25c
10 oz. Can	50c

ALBATROSS CREOLA

Keeps the Coops and Barns White and Sanitary.

Albatross Creola is a white disinfectant paint in dry powdered form and is ready for use when mixed with cold water. It is one of the best forms of health insurance for stock and poultry. May be applied to any solid surface, such as wood, cement, brick, stone or iron, and when dry will be snow white.

It is economical in cost, is durable, easy to apply and is a powerful disinfectant. It kills mites, fly eggs and lice.

Price—5 lb. package 85c; 25 lb. drums, \$4.25; 50 lb. drums, \$8.00. F. O. B. Los Angeles. Add 15c for packing and postage.

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N		P		Y	
Nests	94	Punches—Poultry	94	Yolo	56
Nico Dust	83				
O		R		Y	
Oats	58	Raffia	87		
Okra	35	Radish	41		
Onions	33-34	Rakes—Lawn	78		
Onion Sets	34	Rape	57		
Orchard Grass	53	Red Top Grass	53		
P		S		Y	
Packet Seeds	8	Remedies—Stock	95		
Parsley	35	Rhodes Grass	52		
Parasnisps	35	Rhubarb	42		
Peanuts	35-50	Rice	58		
Peas—Garden	36	Roselle	42		
Peas—Field	48-49	Rutabaga	47		
Peppers	37-38	Rye—Winter	58		
Perennial Rye	60	Rye Grass	79		
Pigeon Nests	94				
Plant Covers	26				
Planting Calendar	6-7				
Plants—No. per Acre	6				
Plant Setter	86				
Potato Digger	39				
Potato Dipping	39				
Potatoes—Irish	39				
Pots—Planting	87				
Poultry Supplies	89-95				
Poultry Remedies	95				
Protectors—Tree	87				
Pumpkins	40				
Punches—Poultry	94				
R		S		Y	
Raffia	87	Salsify	42		
Radish	41	Salt Bush	61		
Rakes—Lawn	78	Seeders	86-88		
Rape	57	Sherwin-Williams Products	82		
Red Top Grass	53	Silo	55		
Remedies—Stock	95	Soil Renovators	48-50		
Rhodes Grass	52	Smilo Grass	53		
Rhubarb	42	Shallu	56		
Rice	58	Sorghums—Saccharine	55		
Roselle	42	Sorghums—Non-Saccharine	56		
Rutabaga	47	Sorrel	42		
Rye—Winter	58	Spinach	42-43		
Rye Grass	79	Sprayers—All Kinds	85-86		
S		Sprays—All Kinds	81-82		
Salsify	42	Squash	43-44		
Salt Bush	61	Squirrel Exterminators	84		
Seeders	86-88	Sunflower	57		
Sherwin-Williams Products	82	Sudan	51		
Silo	55	Sulphur	80-82		
Soil Renovators	48-50				
Smilo Grass	53				
Shallu	56				
Sorghums—Saccharine	55				
Sorghums—Non-Saccharine	56				
Sorrel	42				
Spinach	42-43				
Sprayers—All Kinds	85-86				
Sprays—All Kinds	81-82				
Squash	43-44				
Squirrel Exterminators	84				
Sunflower	57				
Sudan	51				
Sulphur	80-82				
T		V		Y	
Timothy	53	Vetch	48		
Tobacco	58				
Tomatoes	43-46				
Tomato Blight Remedy	46				
Traps	84				
Tree Labels	87				
Tree Protectors	87				
Tree Seeds	78				
Thermometers	93				
Turnips	47				
Twine	87				
V		W		Y	
Vetch	48	Weeders	79		
		Wheat	58		
		Wonder Forage	55		
		Wire Netting	54		
W		Y		Y	
Weeders	79	Yolo	56		
Wheat	58				
Wonder Forage	55				
Wire Netting	54				
Y		Y		Y	
Yolo	56				

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